



IMPERIAL INSTITUTE
OF
AGRICULTURAL RESEARCH, PUSA.

THE
United Planters' Association
OF
Southern India

(INCORPORATED).

♦ ♦ ♦ ♦ ♦

EIGHTEENTH ANNUAL GENERAL MEETING

HELD AT

BANGALORE

ON

28th, 29th, 30th, 31st Aug. & 1st Sept., 1911.

With an Appendix.

♦ ♦ ♦ ♦ ♦

Madras :

PRINTED AT THE ADDISON PRESS.

1911.

THE
United Planters' Association
OF
Southern India

(INCORPORATED).

LICENSE FROM THE GOVERNMENT OF MADRAS.

Dated 22nd April, 1899.

LICENSE.

Whereas "The United Planters' Association of Southern India (Incorporated)" is an Association which is registrable under the Indian Companies' Act, 1882, as a limited Company, and whereas it has been proved to the satisfaction of the Governor-in-Council that it is formed for the purposes set forth in the Memorandum of Association, and that it is the intention of the Association to apply the profits and income of the Association to promote those purposes, and that payment of any dividend to its members is prohibited by the fourth article of the Memorandum of Association, His Excellency the Governor-in-Council is pleased to direct under the provisions of Section 26 of the said Act, that "The United Planters' Association of Southern India (Incorporated)" shall be registered with limited liability, but without the addition of the word "limited" to its name.

THE United Planters' Association OF Southern India

(INCORPORATED).

ESTABLISHED 1894—INCORPORATED 1899.

District Planters' Associations represented.

ANAMALAI PLANTERS' ASSOCIATION	...	...	<i>Anamalais.</i>
BABABUDIN PLANTERS' ASSOCIATION	...	...	<i>Mysore.</i>
CENTRAL TRAVANCORE PLANTERS' ASSOCIATION	...	...	<i>Travancore.</i>
COORG PLANTERS' ASSOCIATION	...	...	<i>Coorg.</i>
KANAN DEVAN PLANTERS' ASSOCIATION	...	...	<i>Travancore.</i>
MALABAR COAST PLANTERS' ASSOCIATION	...	...	<i>Cochin, &c.</i>
MUNDAKAVAM RUBBER PLANTERS' ASSOCIATION	...	...	<i>Travancore.</i>
NILGIRI PLANTERS' ASSOCIATION	...	...	<i>Nilgiris.</i>
NORTH MYSORE PLANTERS' ASSOCIATION	...	...	<i>Mysore.</i>
SOUTH MYSORE PLANTERS' ASSOCIATION	...	...	<i>Mysore.</i>
SOUTH TRAVANCORE PLANTERS' ASSOCIATION	...	...	<i>Travancore.</i>
SHEVAROY PLANTERS' ASSOCIATION	...	...	<i>Shevaroy's.</i>
WYNAAD PLANTERS' ASSOCIATION	...	...	<i>Wynaad.</i>

Executive 1911-1912.

Chairman.—C. E. ABBOTT, *Meppadi, S. Wynaad.*

Vice-Chairmen.—E. F. BARBER, *Ootacamund.*

" A. F. MARTIN, *Srivilliputtur.*

Council.—The Chairman, *ex-officio*; the Vice-Chairmen, *ex-officio*; the Association's Representative on the Legislative Council of Fort St. George; the ex-Chairman (Chairman during the previous year); and the Honorary Secretaries of the respective District Planting Associations (or such other Representatives as these Associations may from time to time appoint).

Secretary.—HARRY ORMEROD, *Bangalore.*

Representatives on the London Chamber of Commerce.

1902-1912...JNO. C. SANDERSON.
 1901-1902...JNO. C. SANDERSON and BROOKE MOCKETT.
 1897-1901...JNO. C. SANDERSON.
 1896-1897...JNO. C. SANDERSON and FRANK MANGLES.
 1895-1896...JNO. C. SANDERSON.

Representative on the Legislative Council of Fort St. George.

The Hon'ble Mr. J. G. HAMILTON, *Chundrapore, Mudigere.*

Former Chairmen and Vice-Chairmen.

<i>Chairmen.</i>	<i>Vice-Chairmen.</i>
1894-1895...Mr. DIGBY T. BRETT.	Mr. G. R. EVANS.
1895-1896...Mr. W. H. SPROTT.	Mr. J. W. HOCKIN.
1896-1897...Mr. G. L. ACWORTH.	Mr. J. G. HAMILTON.
1897-1898...Mr. GEO. ROMILLY.	Mr. H. G. PARSONS.
1898-1899...Mr. GEO. ROMILLY.	Mr. J. C. ABBOTT.
1899-1900...Mr. W. H. SPROTT.	Mr. J. W. HOCKIN.
1900-1901...Mr. H. P. HODGSON.	Mr. A. LAMBERT.
1901-1902...Mr. ROBERT GOMPERTZ.	Mr. J. A. HARRIS.
1902-1903...Mr. J. A. HARRIS.	Mr. E. G. WINDLE.
1903-1904...Mr. GEO. ROMILLY.	Mr. O. SCOT-SKIRVING.
1904-1905...{ Mr. H. M. KNIGHT.	Mr. G. K. MARTIN.
{ Mr. G. K. MARTIN.	
1905-1906...Mr. W. H. SPROTT.	Mr. C. E. ABBOTT.
1906-1907...{ Mr. J. A. HARRIS.	Mr. AYLMER MARTIN.
{ Mr. AYLMER MARTIN.	
1907-1908...Mr. C. E. ABBOTT.	Mr. J. G. HAMILTON.
1908-1909...Mr. J. G. HAMILTON.	Mr. J. A. RICHARDSON.
1909-1910...Mr. J. A. RICHARDSON.	Mr. BERNARD MALCOLM.
{ Mr. R. D. TIPPING.	Mr. C. H. BROCK.
{ Mr. C. H. BROCK.	
1910-1911...{ Hon'ble Mr. J. G. HAMILTON.	
{ TON.	

OFFICES: PARRY'S BUILDINGS, NORTH BEACH, MADRAS,
and
25, SOUTH PARADE, BANGALORE.

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Rules of the U. P. A. S. I.
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The United Planters' Association

OF

Southern India

(INCORPORATED).

THE ANNUAL MEETING.

First Day, Monday, August 28th, 1911.

The Annual Meeting opened at Bangalore, in the Mayo Hall, Bangalore, at 3 p.m., on 28th August, 1911.

The following were present :

Chairman and Planting Member of Council: Hon'ble Mr. J. G. HAMILTON.

DELEGATES.

<i>Anamalais</i>	...	...	...	Mr. E. F. BARBER.
<i>Bababudins</i>	...	...	...	{ Mr. A. C. W. DENNE.
<i>Central Travancore</i>	...	...	...	{ Mr. N. G. B. KIRWAN.
<i>Coorg</i>	...	...	...	{ Mr. F. BISSETT.
<i>Kanan Devan</i>	...	...	...	{ Mr. W. M. BALL.
<i>Malabar Coast</i>	...	...	...	{ Mr. P. G. TIPPING.
<i>Mundakayam</i>	...	...	...	{ Mr. A. F. MARTIN.
<i>Nilgiris</i>	...	...	...	{ Mr. H. C. PLOWDEN.
<i>North Mysore</i>	...	...	...	{ Mr. E. F. BARBER.
<i>South Mysore</i>	...	...	...	{ Mr. A. K. W. DOWNING.
<i>Shevaroyis</i>	...	...	...	{ Mr. A. S. DANDISON.
<i>South Travancore</i>	...	...	...	{ Mr. C. DANVERS.
<i>Wynaad</i>	...	...	...	{ Mr. E. M. PLAYFAIR.
				{ Mr. F. M. HAMILTON.
				{ Mr. CHAS. DICKINS.
				{ Mr. J. B. COOK.
				{ Mr. C. E. ABBOTT.

A Message from Mr. C. H. Brock.

The CHAIRMAN (the Hon'ble Mr. J. G. Hamilton), in opening the proceedings, read the following letter, which he had received from Mr. C. H. Brock, late Chairman of the Association:—

"MY DEAR HAMILTON,—Just a few lines to send you my best wishes for a successful Meeting, and I trust for your sake that it may not

prove a too arduous one. . . . I really do hope that some real progress will be made with regard to labour problems and the Scientific Department, but I do feel that progress with the latter, important though it is, is totally insignificant compared with the former. Owing to the unbridled war of rates and advances now in progress, we will very shortly have increased the cost of production anything from 15 to 25 per cent. Needless to add this is an insane policy, when the trend of all commercial undertakings in these days of keen competition is to reduce the cost of production by uniting individual producers or manufacturers in their particular branch of trade, so as to be able to stand in the struggle against outside competition. If we would only honestly grapple with the question and stop wasting our own money in fighting each other over rates and advances and would spend the money we are now wasting in fighting outside competitors only, then, having secured Labour Peace amongst ourselves, we would be in a better position to improve quality and reduce the cost of production by means of scientific investigation. You may, and probably do, think that I am a 'Labour Fanatic,' but I honestly do not think that I am exaggerating the seriousness of our continual inaction, which is solely due to want of unity. I must ask you to be so good as to apologise to the Meeting on my behalf for having had to abandon my duty to the Association so suddenly and to express my disappointment and regret at not being able to be present at your discussions. . . ."

THE ANNUAL REPORT, 1910-11.

The Annual Report was taken as read, and the statement of accounts was laid on the table.

The following is the text of the Report :—

In this year's report the first place must be occupied by an expression of sincere sorrow at the death of the late Chairman, Mr. R. D. Tipping, and of heartfelt sympathy with his widow and family. Mr. Tipping had only connected himself comparatively recently with the actual work of this Association, and was elected as its Chairman almost at the outset of that connection. His enthusiasm, his energy and his business ability were manifested for all too short a time in the cause of the planters of South India as a community.

Mrs. Tipping desires that her sincere and heartfelt thanks be conveyed to the members of the U. P. A. S. I. and Council for the kind expression of their sympathy which was duly conveyed to her.

The death has also to be recorded with regret of Mr. H. G. Parsons, formerly a Vice-Chairman of the Association and from its earliest years a staunch coadjutor.

Mr. C. H. Brock, who was elected Vice-Chairman at the Annual Meeting of 1910, succeeded Mr. R. D. Tipping as occupant of the Chair, but almost as soon as he had taken charge the Directors of the Company whose interests he represents called upon him to resign; and for the second time in the year a sudden change of Chairman had to be faced.

The gap was filled by the Hon'ble Mr. J. G. Hamilton, who was elected Chairman by the unanimous vote of the Council of the

Association, and now gives it his valuable services in the dual capacity of Chairman and Planting Member of the Legislative Council of Fort St. George.

One new District Association—the Bababudin Planters' Association—has been admitted to membership during the year; and it is desirable to note here a change of name in the case of another member, the Cochin and North Travancore Planters' Association being now known as the Malabar Coast Planters' Association.

During the year the registered office of the Association in Madras was transferred to the premises of Messrs. Parry & Co., who were at the same time appointed Agents.

This year a number of visitors have been invited to attend the Annual Meeting, and delegates have received several invitations of an interesting kind, notably one from the Director of the Indian Institute of Science to visit that institution; and one from Messrs. Scovell's Estate, Ltd., to inspect their fruit farm. They have also been invited by the Mysore Tannery, Ltd., to inspect the works of that Company. The first of these invitations has been accepted already.

Mr. George Romilly having proceeded to England, a vacancy remains to be filled on the Indian Tea Cess Committee, and delegates to the present Meeting will be called upon to elect a nominee for appointment by the Government of India to this post.

A portrait of Mr. H. P. Hodgson, ex-Chairman and ex-Planting Member, has been kindly presented to this Association by the Nilgiri Planters' Association; one of Mr. George Romilly, who served the U. P. A. S. I. in the same two capacities, has been provided by this Association; and a third portrait, that of Mr. J. A. Harris, an ex-Chairman of this body, has been presented by the South Mysore Planters' Association.

These portraits will be hung in the office of the U. P. A. S. I., and the unveiling ceremony is to be conducted before the present meeting closes.

As the years pass appropriate additions will no doubt be made to the nucleus of a Picture Gallery that has now been formed.

It may be also mentioned here that, once again, a small Exhibition is to be held in the U. P. A. S. I. premises, commencing on the morning of the 29th August, 1911. It will be, like its predecessor, modest and unpretentious; nevertheless it will mark a distinctly progressive step, the exhibits being both more numerous and more varied than those of last year. To all those—planters, business firms, and manufacturers—who have contributed samples to this Exhibition the thanks of the Association are due.

A further large increase of work in the office has to be recorded, notably in connection with (1) the Scientific Department and (2) the International Rubber and Allied Trades Exhibition in London. The Laboratory sanctioned last August was virtually completed before the end of December, and was in work by the beginning of the current year. The cost was Rs.2,514-14-5, against an estimate Rs.2,500. Water connections and electric light were fitted up in office and laboratory at the cost of the landlord.

Every year now witnesses a larger turnover of money; and one or two additions to the office staff have become a necessity. As, however, a proposal to extend the scope of the Scientific Department will be brought up for full consideration and discussion at this Meeting, the adjustment of the office staff to the requirements of the future will be partly dependent upon the decision arrived at with regard to this matter. Yet, even if no additions be made to the Scientific staff, consideration of the question of office organization cannot be safely postponed.

So much information regarding the various subjects before the Association is now given in *The Planters' Chronicle* that only brief references need be made here to the principal Resolutions adopted at the last Annual Meeting and to other matters that have since come to the front.

The Scientific Officer.—Mr. R. D. Anstead, B.A., carried out as far as possible the programme drawn up for him last year. Certain slight changes were rendered necessary by circumstances, however, as the original programme failed to make sufficient allowance for the exigencies of the weather and imposed upon the Scientific Officer a very heavy strain.

With reference to the above Officer, a question has been raised lately regarding the right of subscribers (under a guarantee for several years) to the Scientific Officer Fund to personal advice from the Scientific Officer even when such subscribers have ceased to be members of a District Planters' Association. This had reference to a specific complaint that Mr. Anstead failed to visit the estate of one subscriber of the kind under reference. The papers were first laid before Mr. R. D. Tipping, who was then Chairman, and after his death were submitted to the new Chairman, Mr. C. H. Brock, whose ruling was as follows:—

- “(1) That, pending definite rules being laid down at the next U. P. A. S. I. Meeting, anyone who has guaranteed a subscription for a term of years is entitled to assistance from the Scientific Officer during that term, even though he may cease to be a member of his District Association.
- “(2) That Mr. Anstead's Programme, as laid down at an Annual General Meeting of the U. P. A. S. I., must be adhered to.
- “(3) That any subscriber to the Scientific Officer Fund, knowing the programme of tours, as he should, must arrange for Mr. Anstead's services during his regular tour, through the medium of the Honorary Secretary of his Association, or whoever may be arranging the details of such tour.”

Accordingly, the question will come up for consideration at the present Meeting.

Intimately connected with it is a minor question, *viz.*, whether in circumstances such as those noted above a subscriber to the Scientific Officer Fund is, or is not, entitled to a free copy of *The Planters' Chronicle*. It seems desirable that this point also should be discussed.

Experiment Plots and Hybridisation of Coffee.—There is nothing on record concerning this matter beyond the fact that the Government

of Madras have agreed to provide a suitable plot on the Nilgiris, to be under the joint control of Mr. F. H. Butcher, Curator of Government Botanic Gardens, the Nilgiris, and Mr. Anstead, conditional upon the expenses of management being paid by this Association. Several subscriptions have been promised already.

Government Purchases of Cinchona.—The Resolution on this subject was entrusted to the Planting Member of Council. Government have declined to comply with the request made by the Association.

Labour Matters.—The Madras Government have confirmed their former statements, which are to the effect that reciprocal treatment with respect to cool labourers between British territory and the Native States can only be possible if Act I of 1903 is adopted in the districts of the Madras Presidency concerned; and if legislation on the lines of that Act is resorted to within the Native States. These conditions are alluded to as an "essential preliminary" to action on the part of Government along the lines of the Association's desires.

Regarding the attestation of agreements under the above Act, the Mysore Government have pointed out that the Act is operative only in the Presidency of Madras and that no appointment of attesting Magistrates can therefore be made thereunder in Mysore.

In respect to complaints about non-service of warrants and the request made for an increase of the Police Force in the districts concerned, the Government of Madras communicated with the Inspector-General of Police in Mysore and District Magistrates of Madras Districts. With special reference to the Coimbatore District it was further stated that the Police Force there "will be largely increased under the general reorganization scheme now in progress."

The Mysore Government, dealing with this matter in order to local officials, requested "that special attention may be devoted to the execution of the warrants referred to therein and that due notice may be taken of the conduct of the Police where non-service is due to their negligence."

As to emigration of coolies the Madras Government stated:—"The Government are satisfied with the existing situation, and consider further control over emigration in the interests of coolies uncalled for. Endeavour is always made to rectify any case of abuse which comes to the notice of Government, through the periodical reports they receive as to the condition of oversea emigrants and otherwise, and they have no reason to believe that the general condition of emigrants is such as to call for legislative action." They regretted, therefore, that they were unable to support the proposal of the Association for fresh legislation in the matter in the directions indicated in the Resolution adopted last year.

Towards the close of the official year under reference the report of the U. P. A. S. I. Labour Committee was submitted, and it may be added that special "Labour Maps" have been prepared to show the localities in which coolies are recruited for the different planting districts.

The particular attention of the U. P. A. S. I. has been invited by one of the affiliated District Planters' Associations to the efforts

which are being made by the Indian Tea Association, Calcutta, to get the Madras Government to open the Agency tracts to North Indian Recruiters.

Ceylon Import Duty on Tea.—Delay in the preparation of the necessary "brief" for Sir J. D. Rees, M. P., caused this matter to stand over till the eve of a General Election, so that a further postponement was unavoidable. At the election, Sir J. D. Rees was not again returned; and the Resolution passed last year could not, therefore, be acted upon.

Bonus on Green Tea.—The Indian Tea Cess Committee declined to accede to the Association's request for a restoration of the bonus. Mr. A. D. Jackson, of Madras, represented the case, in the absence of a representative of the U. P. A. S. I., but his strenuous endeavours failed to make any impression upon other members of the Committee.

Coffee Curing.—Curers appear to think that there are no improvements available in regard to curing machinery, and all are indisposed to reduce their present charges. If definite suggestions as to improved machines or methods could be put forward they would probably receive consideration.

Proposed Coffee Cess.—The Government of India have not seen their way to modify the former adverse decision.

Imperial Preferential Tariff.—Last year's Resolution on this subject has been circulated very widely, and has elicited a large number of comments, mostly approving its gist.

Roads and Communications.—At the Annual Meeting of the Madura District Board in 1910 it was resolved that until the revised contract with the South Indian Railway comes into force nothing can be done in the way of settlement of terms in respect to the Vaigay Valley Railway project.

Regarding the Attur Ghât road the same Board has declared its inability to find money to put the road into repair. In August last "the question as to the future of the road" was said to be before Government, and nothing further has been heard about the matter since then.

The Arsikere-Mangalore Railway project has been indefinitely hung up. In September 1909, the Government of India stated that they would be prepared to give their sympathetic consideration should any private company come forward with proposals to finance the construction of this line. It now appears probable that the terms of the new contract to be entered into between the Secretary of State and the South Indian Railway Company contain certain provisions with regard to Railway construction in Southern India which will preclude the Railway Board from giving their support to the construction of this line by a private company.

Under instructions from the Chairman (Mr. Brock) the Railway Board was asked about prospects in regard to the Dindigul Pollachi-Palghat line, which was stated by the Planting Member of Council (Mr. Hodgson) in 1907 to have been "given a high place by the Government of Madras in their programme of construction of new lines" and to be likely to be commenced in 1908-09.

The reply received was that the Board "regret they are unable to say when the line will be constructed."

Prevention of Thefts of Produce.—Representations as to the necessity of special legislation for the prevention of thefts of Rubber, Tea, Pepper and Cardamoms have proved of no avail. The Madras Government "do not find that there are sufficient grounds to justify the special legislation desired by the Association."

A Regulation for the Prevention of Thefts of Rubber within the Travancore State was introduced into the Legislative Council of that State during the year by Mr. J. A. Richardson, but the result has not transpired.

Proposed Pest Act.—Although it is understood that there is little prospect of the adoption of a Pest Act such as was in view when a Resolution on the subject was passed last year, the Government of India appear likely to take a step in the right direction by passing a law to control the importation of plants, grafts, seeds, and the like, in order to prevent the introduction into this country of insect pests and fungoid diseases. A proposal to this effect has received the approval of the Association, and though the Act contemplated will fall very far short of the aims of a Pest Act dealing with pests and diseases already established in India, there is some room for hope that experience with respect to the one piece of legislation may serve to bring more prominently to the front the necessity for the other.

The International Rubber Exhibition.—This subject is touched upon with considerable diffidence, because of the absence of precise information concerning the exhibits sent forward. These exhibits were not despatched through the U. P. A. S. I. office, and it was only on the eve of the opening of the Exhibition that your Secretary had reason to fear that their number was very small. Mr J. A. Richardson, Chairman of the Committee appointed to make the necessary arrangements in London, has sent in an official report on the South Indian stall; and the financial aspect of affairs is shown, as far as can be done at present, in the Accounts section of this report. The office had to deal with a considerable amount of correspondence in connection with the Exhibition, as well as with the revision of the manuscript for the hand-book.

An Appeal.—At the instance of the Planters' Association of Ceylon the District Planters' Associations affiliated to the U. P. A. S. I. were invited to consider an appeal made with a view to the presentation of a testimonial to Mr. H. A. Wickham, the introducer of Pará Rubber Seed into the East.

Publications.—The Annual Book of Proceedings was issued as usual; sales were not quite satisfactory.

In regard to *The Planters' Chronicle*, a great advance has been made. Publication every week, instead of monthly as before, seems to have enhanced the popularity of the paper very much, and advertising support has increased very materially. Contributions by the Scientific Officer have been forthcoming in liberal measure and have assured to the *Chronicle* a welcome in the homes of planters in South India. It would become much more worthy of that welcome if

planters themselves would send a more generous supply of occasional contributions, to promote discussion on planting subjects, and if they would also offer suggestions and criticisms more freely than they have done in the past.

Accounts for the year, duly certified by the Auditor, have been laid on the table. In a measure, the figures indicate the increasing strain imposed by the growth of the Association's work. They also establish a new record in respect to financial turnover. A comparison of Actuals with Estimates shows the following totals in the General Fund :—

	Estimate.	Actual.
Receipts ...	Rs. 8,166-1-10	Rs. 8,968- 7-7
Disbursements ...	„ 7,900 0- 0	„ 8,245-13-4

It must be noted, however, that the Income comprises Rs.410-6-0 received on account of subscription for 1911-12, besides a sum of Rs.454-6-0 received as third dividend from the insolvent estate of Messrs. Arbuthnot & Co. and transferred to the Reserve Fund, together with Rs.45-10-0 to make up a round sum of Rs.500. The above two items cannot be reckoned as part of the ordinary receipts for the year 1910-11, the real total of which is Rs.8,968-7-7 *minus* Rs.410-6-0 and Rs.454-6-0, or Rs 8,103-11-7.

On the Disbursements side two items that were not anticipated at the beginning of the year, *viz.*, Labour Maps and Enlarged Photograph, have involved an expenditure of Rs.148-4-0 that was not provided for in estimates. Moreover, the expansion of business has rendered necessary a larger outlay than was expected on Postages, Stationery and Petties: in the case of the first item to the extent of 60 per cent.; the second nearly 150 per cent.; and the third nearly cent. per cent. over the "actuals" of 1909-10. The figures affected are not large, but the increases noted deserve special mention because of their intimate relation to the increase of work.

Last year sanction was taken for the temporary use of any portion of the Reserve Fund that might be required in connection with the fitting up of the Laboratory for the Scientific Officer; and experience has demonstrated the wisdom of this course. When all the promised subscriptions towards the cost of the Laboratory come in the loans taken from the Reserve Fund will be replaced. Already (up to the 25th August, 1911) a sum of Rs.640-15-6 has been received on this account since the close of the financial year with which this present report is more particularly concerned.

It will be seen that the International Rubber Exhibition Fund showed at the close of the year a cash balance of Rs.4,471-5-5. Accounts of expenditure in London had, however, not been received at that time; and if Mr. Richardson's estimate of total outlay turns out to be correct, the above balance will be materially reduced, as only £350 was remitted Home before the 30th June last. Besides this there is at least one claim in India that has to be taken into consideration.

Owing to demands in connection with the Laboratory, to uncertainty as to the demands likely to be made from London in respect to the International Rubber Exhibition, and to the late receipt of a number of subscriptions of one kind or another, the fixed deposit carried

over from last year was not renewed at maturity. If circumstances had permitted, it would have been re-invested at a later date; but this could only have been done almost at the close of the financial year, and by then there were complications which rendered it desirable that all the funds of the Association (with the sole exceptions of the S. I. P. B. F., already invested in Government securities) should be held at call. Hence the large amount held in current account with bankers at the close of the year.

The Reserve Fund has increased from Rs.2,000 to Rs.2,500; but as explained above, a portion of this has been temporarily invested in connection with the Laboratory.

In the S. I. P. B. F. accounts only a small cash balance of Rs.325-8-7 is shown, but investments in Government paper now total Rs.10,000. Happily, there have been no demands made on this fund hitherto; and as the subscriptions for 1911-12 come in further investments should become possible. Special mention may be made of the fact that through the kind offices of Messrs. F. H. Allan & Co., of London, donations from London brokers, &c., to the value of Rs.1,797-3-4 were collected during the year, and the above firm has encouraged the idea that in this instance gratitude may be correctly described as mingled with a lively sense of hope of further favours to come.

In conclusion, your Secretary begs to tender his resignation.

The Chairman's Opening Address.

GENTLEMEN,—Owing to a double disaster I find myself for a second time the unfortunate holder of your two highest offices, a record which I hope will not be repeated. The mistake, for it is one, would not have been made this time had we elected, as we should have done, a new Vice-Chairman on Mr. Brock's succession to the higher office. It has always been held inadvisable that one man should be Chairman and also Planting Member, but it was twice necessary as a temporary measure before my first offence. If it was bad policy in the past it is very much more so now that your work is becoming so increasingly strenuous year by year. Had it been a matter extending over more than a few weeks this time I should not have felt able to carry on the dual office, and during the cold weather no one who has other work could do you justice.

I have been recently re-reading the Proceedings of our first Meeting, and find that in opening the discussion on the subject of an Annual Conference *versus* a Permanent Association I warned Delegates not to think that when Act XIII was disposed of there would be no work to do. Even I, with all the sanguine hopefulness of youth, did not then foresee what a growth there would be. I remember that we started with an income of Rs.2,400, which was thought ample; we have now over Rs.7,000 and are hampered in every direction by want of funds. All this means that a Chairman who is not content to be a mere name will find plenty to do.

The loss we sustained by the death of our Chairman, the late Mr. R. D. Tipping, is perhaps greater than we had time to realise. Men of his stamp are not common enough, and many of us confidently looked for useful work from him. There was no time to prove his value, but I hope that one thing will become a memorial

to him, and that thing is some improvement in our Scientific Department, a matter to which he intended to pay great attention.

Mr. Brock's temporary withdrawal from active work is also a great disappointment to us, as well, I know, as to himself. One of our keenest spirits and most thorough workers, we cannot spare him for long, and I hope he will soon return and take his place among our leaders.

Death has taken away another of the Old Guard, our genial old friend H. G. Parsons. An attractive speaker, hard yet good-natured debater, we missed him when he gave up Planting, and have now lost him for ever after a short return to our company last year.

Two more good men have left India, and though we can rely on their help whenever we are able to consult them, the departure of George Romilly and J. A. Harris has left a big gap in my life personally and yours politically, if that is the right word. They had been intimate friends of mine and hard workers with and for us all since I first knew them over twenty years ago, and Mr. Romilly had been working for many years then; in fact, I only came to make his acquaintance through my early efforts towards this Association, he being at that time the most prominent Honorary Secretary of Planters' Associations, and my strongest supporter and helper.

You will not expect as full an address from me as could be demanded from one who had been in charge of affairs for the whole year, but I have endeavoured to draw some information from your records as well as from the frequent intercourse which I have held with your Office and Officers, and if I make no attempt to separate Legislative from general business you will perhaps be kind enough to forgive me.

Coffee.—The market is in a much more healthy state than has been the case for years past, and while it must be admitted that speculation still influences the Terme market, if not the Spot one, to an undesirable extent, there is no doubt that the statistical position shows such satisfactory features that prospects can be safely called vastly improved.

Tea.—While the promised boom has failed to materialize to the full extent hoped for, I think it is permissible to say that, in my opinion, South India has done very well in the past year and has every prospect of a brilliant future if only the one great trouble common to all of us can be got over. For Tea more than for any other of our industries, a steady supply of labour is needed. Quality on the whole seems to have been more than maintained and no serious diseases have taken possession. Very large acreages have been opened up, which is the best proof possible of a satisfactory position.

Rubber.—In this also large extensions are being made. Prices, while far below the unhealthy inflated range of last year, are at a level which will give all honest concerns a very good return. There can be no doubt that much rubbish in the way of Companies remains to be weeded out, but there would appear to be practically none in South India.

Cinchona cannot, I fear, be taken very seriously, as the Government is firm in its refusal to take the steps which we suggested would preserve the industry with an eye to the future. I can only advise owners of it to make what they can with as little trouble and expense as possible.

Cardamoms have perhaps done a little better, while

Pepper remains depressed.

Membership.—As the Secretary has informed you, we have had the great pleasure of receiving a new member this year, the Bababudin Planters' Association.

Coffee Cess has again been refused, and I suppose we must take it that this refusal after reconsideration is for the present final. No objections were raised to the scheme, so we can only presume that after the agitation of a minority against the renewal of the Tea Cess in Ceylon (which was successful) the principle is objected to. Government may also have thought that the amount involved was not worth the trouble.

Theni Bridge.—With great satisfaction I record the removal of this blot from our Agenda Paper. I hear rumours of an Oliver Twistish desire for more bridges in the same neighbourhood, but no news has come from any Association officially.

Scientific Department.—Very rightly this promises to form a large fraction of your programme this year. We are all agreed, I think, that it is futile to go on as at present, for no man can deal satisfactorily with more than about a quarter of our acreage single-handed. We have to decide whether to advance and have schemes for practical work, or to allow Mr. Anstead to sit in our headquarters for the greater part of the year and do what he can for us thence. At present most of his life is spent in travelling, and it is time he was allowed to get something done with a reasonable amount of leisure.

Pest Act.—I have been making some preliminary inquiries from officials and landholders on this subject, and feel grave doubts as to the possibility of getting all the 5 Governments under which we hold land to agree to an Act such as we desire.

Our position in regard to matters of this kind is one of the greatest difficulty, and cannot be in any way compared with that of Planters, or any other body, who are under one authority and are able to make their wants known by one representation. As to a Pest Act one great trouble is the matter of Government land surrounding private holdings; the acreage to be kept free from diseases and pests would in the aggregate amount to something enormous, and I do not see how to deal with this aspect. Unless, therefore, a more or less definite scheme is drafted for me I fear that with all my own work I cannot undertake to press the question. If you will give me a good draft scheme to put into shape I will see what can be done.

Labour.—I have nothing to report save that the situation is no more hopeful, perhaps it is less so. Act I remains almost as much out of favour as ever, though there may be some forced conversions, and without it I can hold out no hopes of any form of Extradition.

Leaving aside, however, all Legislative remedies, and the known difficulty of finding any which will suit us all, are there no ways in which we can improve matters amongst ourselves? I do not mean by agreements which cannot be enforced if broken, but some improvements in our methods of working. For instance, has a system of monthly instead of daily pay been tried, one with a deduction of something more than a day's wage for *unreasonable* absence? We all know that there is a great deal of unnecessary wastage, that with many if not all classes of coolies we have to maintain a force which it might be inconvenient to employ if it turned out steadily to work, because there is always a large proportion who will only work just as many days in a week as is necessary to secure their bazaar money. This, by the way, is one of the inevitably attendant evils of giving big advances, as any planter can see if he thinks over it, and in its turn brings about further wastage; it is notorious that while men on regular work who have to turn out six if not seven days a week (horsekeepers, kitchen coolies, tappal coolies, &c.), seldom get sick more than we ourselves are liable to do, the known loafer generally gets more or less genuinely ill. We have been told that in some countries it is a regular thing to keep more than are really required and to turn them out only when there is work, but if this is so, I do not think that it is right or unavoidable with proper management; I do not think that it is just. I am a Coffee Planter and want many more coolies to pick my crop for a few months than I care to employ for the whole of the usual nine months working season, and I think the same applies to all of us, because there can be very few now-a-days, if any, who get local or other casual labour at that season, and I can assure you that it is very rare in my District to hear of a man turning away coolies just because he has no immediately remunerative work to give them. I do not know if anything such as I suggest has been tried and condemned for good and sufficient reasons, but throw out the idea not as a definite proposal to be discussed, but as an instance of the sort of line in which our experts might seek for some relief. Labour-saving devices are worth considering as well as labour-procuring ones.

Green Tea.—We were last year instructed to ask for a renewal of the bonus on Green Tea, and the request was duly and properly made. Mr. Jackson, who was kind enough to undertake the task in the unavoidable absence of our own representative, has personally described to me his splendid isolation on the occasion, and although he made no complaint about the reception he had, in fact, did quite the opposite, I think that if you want to ask again we must take care to send someone directly interested in the question to take the burden on his own shoulders.

Rubber Exhibition.—This seems to have been quite successful, and while it is to be regretted that South India was not ready for it owing to the youth of Rubber in most districts, it is satisfactory to be able to record that we collected over Rs.6,000 among planters and, aided by the most liberal assistance of the Madras Government, who give us Rs.3,000, and donations of Rs.500 from the Government of Travancore and Rs.300 from the Government of Cochin, presented a stall which has been described as most attractive.

Benevolent Fund.—You will be glad to note the very satisfactory progress made by this most necessary institution. I hope that your

prudence and foresight in this instance are only indications of a general tendency which will be further illustrated in other directions.

We have been much disappointed to learn within the past few days that Ceylon will be unrepresented at this table ; we had great hopes of seeing not only a Planting Member, but also the Labour Commissioner ; but since my arrival here, I have learnt that both have sent telegrams saying that unexpected difficulties have arisen to prevent their coming. I am sorry, therefore, that we will not have an opportunity of returning the hospitality shown to Mr. Romilly and of discussing questions of mutual interest.

I don't intend to make any separate remarks about the work of the Planting Member, but if anybody would like to ask me any questions about the work of the past year, I shall be glad to answer now or when the subjects are brought up.

Annual Report of the Scientific Officer.

1st July, 1910, to 30th June, 1911.

MR. CHAIRMAN AND GENTLEMEN,—I have the honour to present to you my Second Annual Report as Planting Expert and Scientific Officer to the U. P. A. S. I. This Report is drafted upon the lines adopted in my report of last year, and deals with general matters only ; any detailed discussion of pests, diseases, and manures, will be dealt with under their separate headings on the Agenda Paper.

Office and Correspondence.

My office staff throughout the year has consisted of one writer and one peon, and the upkeep of this staff is met by a contribution from the Government of Madras.

The office work has shown a large increase during the year, the number of letters received being 536, as compared with 217 last year, and the number written being 534, as compared with 210 last year. The majority of these letters have been from planters asking for advice about manuring, cultivation, pests, etc., etc., and they have all received my personal attention, so that correspondence alone takes up a large amount of my time when I am at headquarters. Should this branch of the work increase in the same proportion during the coming year as it has done during the year under review, a second writer will become necessary, since the bulk of this correspondence can, of course, only be dealt with during my presence at headquarters.

The Planters' Chronicle.

I have contributed regularly to the pages of the *Planters' Chronicle*, which has been issued as a weekly throughout the year, and have written for it, 35 Papers, and 62 Notes, as well as miscellaneous items. The publication has been used as a medium of communication with planters, and in its pages the questions asked by correspondents, when of general interest, have been dealt with. I am glad to be able to report that the *Chronicle* appears to have gained a high place in the planters' regard and is regularly read by them. There is still, however, room for improvement, and I am often asked questions which have already been answered in the

Chronicle, thus giving me unnecessary work. The Secretary and I are always pleased to receive suggestions for making the *Chronicle* more interesting and efficient, and I deplore the fact that more contributions to its pages are not received from the planters themselves, and that the Correspondence columns are not more freely used in preference to those of the daily Press.

Herbarium and Collections.

Little work has been done on these during the year, for want of time. The collection of Leguminous Plants suitable for green dressings and cover crops has been added to to some extent, however, and my thanks are due to Dr. Barber, the Government Botanist, stationed at Coimbatore, for his kindness in checking determinations and naming plants, from herbarium specimens sent to him.

A Microscope and collecting apparatus have been received from the Government of Madras, and, given the necessary time, plant diseases can now be studied in detail at the office.

Tours.

The majority of my time, during the period under review, has been occupied in touring in the planting districts, and in visiting estates. The following districts have been visited in the order given, most of them for the second time, though in many cases new ground has been covered:—Wynaad, South Malabar, Cochin, Mundakayam, Central Travancore, Coorg, South Mysore, Anamalais, Shevaroy's, Nilgiris, South Travancore, North Mysore. In addition to this I made special visits to Coimbatore and Hunsur to inspect Coffee Curing works in connection with a preliminary investigation into the question of the Quality and Curing of Coffee.

These tours have necessitated my being absent from headquarters for 176 days, and travelling a distance of 4,438 miles by rail, and 2,004 miles by road. Last year I travelled 1,800 miles by road. As during last year all the tours have had to be made rapidly, and no detailed work could be done during their progress.

During most of my tours I was able to attend Meetings of the District Planters' Associations, and in many cases special meetings were arranged for me, and on these occasions I delivered lectures, twelve in all. I should like to take this opportunity of expressing my thanks to the Honorary Secretaries of the District Planters' Associations for the arrangements they have made for me, and to all those who have so generously afforded me transport facilities, and helped to make my tours easy and successful.

It will be seen that this touring is no light task, however, and I must point out that the strain is too great, and request that in the future my touring should be largely reduced. I find that my health will not stand the strain of constantly knocking about the country in all weathers, in addition to all the other work that there is to do. I have now visited all the Planting Districts connected with the Scientific Department of the U. P. A. S. I., and some of them twice, and I have a very fair working idea of their conditions. Moreover, I have given all the advice which it is possible for me to give from a casual inspection of estates, and it is impossible for me to do more

when my visits are confined to a few weeks in each district, much of the time being taken up in actual moving from place to place. I can now give just as good advice from my office as I could on the estate, upon points which do not need field study. I cannot say anything new about 'Green Bug' or 'Mosquito Blight,' for example, by inspecting a dozen more estates which are attacked by these diseases; having once seen them, and knowing the local conditions obtaining in the district, nothing is gained by further casual inspection of them. The same applies to other diseases.

I would suggest that I now be allowed to work at headquarters on definite problems, and that my touring be confined to a few districts each year, so that I may tour at leisure and spend more time in the districts visited.

This raises another question, that of assistance. The work of the Scientific Department has increased so enormously during the last two years that it has reached a point when it is impossible for one man to deal efficiently with it all. Research work is needed, and also field work, if the utmost possible benefit is to be obtained from the Scientific Department, and it is quite impossible for one man to do both over such a big field as Southern India, with its varying soils, climates, and crops, and its great distances. I therefore have the honour to request that the Scientific staff may be increased, and I am very glad to know that you will have under consideration at this Meeting a Scheme (originally brought forward by Mr. Browne) the adoption of which would necessarily supply me with assistance such as I need. I feel confident that you will recognize that it is impossible for me to do more than I am doing now, or to continue working at such high pressure in future years, and that the Scheme will receive your earnest attention.

Manuring and Experiment Plots.

At the Annual Meeting in 1910 a Scheme was adopted, whereby Experiment Plots were to be established on estates in each district upon which experiments could be carried out, and local Committees were to be appointed to arrange for this.

During the period under review this Scheme has been carried out in some districts, and, as far as I have been able to ascertain, experiments on the following subjects are being carried out in the districts named:—

NORTH MYSORE	... Effect on Stamp Rot of Fungicides applied to the Soil.
BABABUDINS	... Manurial Experiments with Coffee.
SOUTH MYSORE	... The quantity of Mulch deposited from shade trees, and its manurial value.
" "	... Conservation in pits of Composts of pulp and line sweepings.
" "	... Effect of Bordeaux Mixture on Black Rot of Coffee.
" "	... Leguminous Green Dressings for Coffee.
ANAMALAIS	... Conservation in pits of Composts of pulp and line sweepings.

ANAMALAIS	...	Nitrolim as a fertiliser for Coffee.		
COORG	...	Effect of fertilisers on the latex yield of Ceará Rubber.		
"	...	Green Dressings for Coffee and Rubber.		
NILGIRIS	...	Pruning Tea to control Purple Mite.		
"	...	Nitrolim as a fertiliser for Tea.		
"	...	Green Dressings for Tea.		
"	...	Coffee Manurial Experiments.		
WYNAAD	...	Green Dressings for Tea.		
MUNDAKAYAM	...	Effect of fertilisers on the latex yield of Hevea Rubber.		
CENTRAL TRAVANCORE	...	Green Dressings for Tea.		
COCHIN AND SOUTH MALABAR	...	Manurial Experiments with Hevea Rubber.		
"	"	"	...	Pollarding Hevea as compared with cutting out when thinning becomes necessary.
"	"	"	...	Green Dressings for Rubber.
"	"	"	...	Pink Disease and Bordeaux Mixture.

The results of some of these experiments have already been published in the *Planters' Chronicle*; and future results will be published from time to time as they become available. Some experiment plots exist only on paper, it is to be feared; and in order to derive the full benefit from the Scheme, it is necessary to have a scientifically trained man to take charge of the experiments and see that they are carried out. Should Assistants be appointed in the different districts it is proposed that this should be a special part of their duties.

Work upon Hybrid Coffee has been continued during the year, and in Coorg an additional plot of existing Hybrids has been taken up experimentally.

I have gained the sanction of the Government of Madras to the allotment of a piece of Government land in the Nilgiris where this work can be carried out in a systematic way by Mr. Butcher, the Curator of the Government Gardens and Parks, the Nilgiris, and myself, subject to certain conditions which will be laid before you during the course of the Meeting, and I request your consent to these conditions.

Laboratory.

The sum of Rs.2,500 was sanctioned at the Annual Meeting in 1910 for the establishment of a Laboratory, and this has been fitted up in the premises adjoining the office. It was ready for use by the 1st January, 1911, and a certain amount of work has been done in it, and it has already proved a useful aid to my work.

Bordeaux Mixture and Pink Disease.

The most important piece of work which has been done during the period under review is the investigation of a method for controlling Pink Disease (*Corticium javanicum*) a fungoid disease of Hevea Rubber. Experiments in connection with this were begun on

Palapilly Estate early in 1910, and have, I am glad to report, resulted in the discovery of a completely successful method of dealing with a disease which has in the past caused a considerable amount of loss to Rubber Planters.

The method adopted is a preventive one. All the trees liable to attack should be painted in the forks with the Bordeaux Mixture in the dry weather. The spores of the fungus germinate in a medium of Bordeaux Mixture when the rains come and are thus killed. This method has been found in the field to reduce the number of trees attacked by the disease to about one per acre at a cost of less than Rs.2 per acre, while Mr. Gudgeon, the Manager of Palapilly Estate at the time the experiments were conducted, reported that he believed that "if every tree was done properly there would be no cases of Pink Disease."

This may, therefore, be considered as a piece of work which has been finished, and the method recommended should be generally adopted. Meanwhile the experiments are being continued in order to clear up a few details, and enable us to standardise the method and reduce it to its lowest factor of economy consistent with efficiency.

Work in Progress.

Among investigations in progress the following may be noted as of special interest. Fairly extensive trials are being made with various Leguminous Plants as Green Dressings and Cover Crops, and *Tephrosia purpurea* seems to be the most suitable plant to use for the purpose in our planting districts. Seed is available in quantity, and about three tons were obtained during the year and distributed through the U. P. A. S. I. Office.

Trials of the Nitrogenous fertiliser Nitrolim are being made on Coffee, Tea and Rubber, but it is as yet too early for results to be available. Methods of treatment of old coffee attacked by Stump Rot, caused by the fungus *Hymenochaeta noxia*, have been actively taken up, and it is now generally recognised what this disease is and the harm it may do. Considerable progress has been made with methods of tapping and preparation of Ceará Rubber during the year, and an investigation has been begun upon the possibility of increasing the latex flow by the use of Nitrate of Soda as a fertiliser. A preliminary trial of crushing Hevea seeds, extracting the oil from them, and preparing a poonac, has been carried out. This trial was not altogether successful, owing to want of proper machinery, but analyses showed that the residual poonac from Hevea seeds after all the oil has been removed is a valuable one, and the experiments will be renewed during the coming fruiting season.

Pest Act.

It would appear that a Pest Act is not feasible. An Act is under consideration by the Government of India, however, to enforce the fumigation and disinfection of imported plants, and thus prevent the introduction of new diseases. This is a step in the right direction, and I am glad to note that it has been supported by the U. P. A. S. I. Every effort should be made locally to prevent the introduction of pests from one district into another, and I

strongly advise all Tea Planters to disinfect Tea seed imported from the North of India, by soaking it in a solution of Formalin, to guard against the possible introduction of Blister Blight. I am glad to note that the Mysore Planters' Association have taken measures during the year to avoid introducing the Green Bug (*Lecanium viride*) on to their Coffee.

Agriculture at Annual Meetings.

In my Report last year I had the honour to recommend that at least one purely agricultural subject should be taken up at this Meeting for discussion, and that an attempt should be made to get a planter to deliver a lecture on the subject chosen. I regret to have to report that attempts to arrange this have met with no success, but I once more put forward the recommendation. I also believe that the District Associations would become more popular, and awaken more general interest in improved agricultural methods, if they occasionally had such discussions and lectures at their Meetings, combined with a small exhibition to illustrate the subject of the lecture, or matter under discussion.

In conclusion I desire to record my very grateful appreciation of the kindly and sympathetic assistance I have received throughout the year from the Secretary of the U. P. A. S. I.

The Rules.

After the reading of the Report of the Scientific Officer, the Chairman, in moving a Resolution from the Chair regarding a proposed alteration in the Rules of the Association, said:—

GENTLEMEN,—As the points touched on by the Scientific Officer in his Report will come up under various headings in the Agenda, I do not propose to take any discussion on the Report just now. But there is one point—it would more rightly come at the end of our discussion on the Rules—which for the sake of convenience, I wish to bring up now. I wish to move the following Resolution:—

“That the Scientific Officer be permitted to move Resolutions at the Meetings of the U. P. A. S. I., but not to vote.”

The Scientific Officer is not a member of the Association, and without special permission he has no power to move any Resolutions. I move the Resolution in order to enable him to bring forward Resolutions in connection with his Department.

Mr. A. F. MARTIN (Kanan Devan), in opposing the Resolution, said:—

Mr. CHAIRMAN,—There is one member of this Association, which does not subscribe to the Scientific Officer Fund, or to the funds connected with his Department. I said some years ago that in my opinion each District should have its own Scientific Officer, and manage its own business so far as scientific cultivation or advice is concerned. It is impossible for one man, no matter how scientific an officer he may be, to do all the work for all the Districts represented in this room, differing as they do in almost every particular of soil, climate and products. What is of interest to one District may be of little

interest, or only of academic interest, to another ; I think more good would be done if the Scientific Officer dealt in the Districts themselves with the topics interesting to those particular Districts, and spoke all he had to say to the planters in those Districts at the Meetings of the local Associations, than if the time of the U. P. A. S. I. was taken up with those subjects. I feel that too much of our time here is thus taken up. Personally I consider it a great privilege to be able to read all the very interesting papers written by him in the *Planters' Chronicle*, but my sense of enjoyment is only dulled by the knowledge that in this connection I am a robber.

There is only one thing I like better than reading all the Scientific Officer writes, and that is to hear him speak, so you will understand that I personally stand to lose a lot by opposing the proposal before us. It is merely a question of the time occupied. Few of us (and those few I heartily congratulate) can say their time is their own, and if we consent to the Scientific Officer bringing up proposals and supporting them with scientific arguments, encouraging us with our unscientific floundering to support or oppose him as the case may be, it will only mean lengthening the time occupied by these Meetings—a very enjoyable time, no doubt, but already too long from the point of view of an Association not subscribing to the Scientific Officer Fund. I shall, therefore, vote against the proposal, and call upon those who feel they can ill spare the time occupied to vote with me.

On the motion of Mr. F. M. HAMILTON (S. Mysore), the Meeting at this stage went into Committee.

[IN COMMITTEE].

Mr. E. F. BARBER (Nilgiris and Anamalais) asked if Mr. Martin meant that all scientific discussion was to be debarred at this Meeting.

Mr. AYLMER MARTIN (Kanan Devan).—No sir, I don't mean that. As far as the Scientific Officer's Report is concerned, any proposals that come out of it can be discussed.

Mr. BARBER.—I take it that Mr. Anstead wishes to move Resolutions from his Report.

The CHAIRMAN.—I do not think that Mr. Anstead wishes to be bound in any way. He wishes to be able to bring forward Resolutions generally on subjects affecting his Department.

Mr. BARBER.—Can you give us the Resolution again?

The CHAIRMAN read the Resolution.

Mr. BARBER.—Would not the objection be met, by someone else moving the Resolutions? That could easily be done.

Mr. F. M. HAMILTON (S. Mysore).—I think that on subjects relating to the Scientific Department Mr. Anstead should be allowed to move Resolutions at this Meeting. Beyond that I think he has no desire to go.

Mr. C. DANVERS (N. Mysore).—Personally I think it would be a great advantage to allow Mr. Anstead to put Resolutions at these

Meetings. I am not inclined to confine our deliberations to political matters. I think a great many of us are anxiously awaiting the publication in the *Madras Mail* of his admirable report, and are looking forward with great interest to what Mr. Anstead has to say at this Meeting. I believe that he will confine himself to scientific matters. Although he should deal in the Districts with matters which appertain to Districts, here he should have a wider purview, and we must always hear something to our advantage. I think it would be a great advantage if Mr. Anstead were allowed this privilege.

[IN OPEN MEETING].

The Resolution was carried.

Weights and Measures.

Mr. A. F. MARTIN (Kanan Devan) proposed:—

“That last year’s Resolution on the subject of Weights and Measures be re-affirmed, *viz.*, ‘That this Association, realising that the Madras Government have done all that is reasonable for the present on the subject of the Standardisation of Measures, now urges upon the Government of India the necessity for the Standardisation of Weights throughout the country.’”

The Resolution was seconded by Mr. C. E. ABBOTT, and was carried unanimously.

Roads and Communications.

THE ATTUR GHAT ROAD.

Mr. E. F. BARBER moved the following Resolution:—“That Government be requested to state definitely their intentions with regard to the Attur Ghât Road, in order that the estates interested may know if they must take other steps for making an outlet for their produce. Further, in the event of a decision to abandon the road, that Government be requested to inform the Association exactly how much money has been wasted on this abortive project.”

Last year I brought up the matter of the Attur Ghât. Recently I have been along this road. With its good trace and stone-in-mortar parapet walls and revetments, it is a monument to the good work done by the D. P. W., but in its present abandoned condition, with its breaches and landslips, with scarcely enough room in parts for a footway, it is also a monument to the folly of Government and their aptitude in wasting public money. The road which might have been a boon to the estates has been the reverse. The making of it led to a large extension of the plantain cultivation; now it is abandoned, all this extra produce has to be carried down in head loads, and where labour for the estates was scarce it has become scarcer.

Is it impossible to hope that the originator, or originators, of this folly will be called over the coals for it, or that any of the wasted money will be refunded? I ask you, gentlemen, to support this Resolution.

[IN COMMITTEE].

The Meeting then went into Committee.

Mr. MARTIN (Kanan Devan).—I wish to point out that we are acting for an Association that is not a member of this United Association.

The CHAIRMAN.—I think I asked you this same question last year with regard to the sum you proposed to raise as a road cess. If the road has been surveyed, how much money could be promised?

Mr. BARBER.—The amount was put before Government or the District Board.

The CHAIRMAN.—A definite amount.

Mr. BARBER.—Yes, I think so.

Mr. F. M. HAMILTON.—You represent the Estates of planters who are not represented on any District Association.

Mr. BARBER.—The Estates belong to Companies, the members of which are members of our Association.

Mr. MARTIN.—I mean that the Lower Pulneys are not represented as an Association on this Association.

Mr. BARBER.—You can't expect them to: they can't get out of the place (laughter).

The CHAIRMAN.—In this matter I take it, you are not going to the Government, but to the Madura District Board.

Mr. BARBER.—I think not, Sir. The road was made by Government, who must have some idea why it was abandoned.

Mr. F. M. HAMILTON.—It was made by the District Board under a Government Engineer.

Mr. BARBER.—There must have been some special grant for it. No District Board would make a road like that.

The CHAIRMAN.—I take it that it was a road meant to go through to Kodaikanal.

Mr. BARBER.—Yes, but when it reached Thandigudi it stopped and was abandoned.

The CHAIRMAN.—What acreage will be benefitted by this road.

Mr. F. M. HAMILTON said about 1,000 acres.

Mr. C. E. ABBOTT (Wynaad).—You are not asking for funds on this occasion?

The CHAIRMAN.—Not directly. If you are not aiming at getting funds, what is the object of the Resolution?

Mr. BARBER.—I think it is disgraceful that Government should be allowed to do such things in this Presidency.

Mr. W. M. BALL.—I think we want to get everybody to join us, and I don't see any use in working for people who won't join us. No matter how small they are, they should join us.

The CHAIRMAN.—Mr. Barber, we have it in the report that the present condition and the future of this road was said to be before the Government. Have you heard anything further since, and don't you think you should enquire? I rather deprecate the last few words until you make further enquiries.

Mr. BARBER.—Perhaps Mr. F. M. Hamilton will say whether the last few words are just?

Mr. F. M. HAMILTON.—I must say that I think that a good deal of money was wasted on the road.

The CHAIRMAN.—It is scarcely a diplomatic way of putting it, if you want to get the road. I don't think the inclusion of the last few lines will help us along at all. I quite agree with the first portion, that we should ask for an expression of Government's intentions; but I should like the Meeting to decide two questions: first, whether we are entitled to ask what amount of money was spent, and secondly, whether, if we do demand that information, it is advisable to use those exact words.

Mr. DANVERS.—I think that it would be more diplomatic if the Government were asked their intentions only. We have no right to ask them what they have spent. There might have been an engineering mistake with regard to the alignment of the road, and they might not care to tell us what they have spent.

Mr. BARBER.—If Mr. Abbott does not object, the last part of the Resolution may be omitted.

Mr. ABBOTT having signified his assent, this was done, and the following amended Resolution was carried in Committee and confirmed in Open Meeting:—

“That Government be requested to state definitely their intentions with regard to this road, in order that the estates interested may know if they must take other steps for making an outlet for their produce.”

[IN OPEN MEETING].

THE VAIGAY VALLEY RAILWAY.

Mr. MARTIN (Kanan Devan) proposed—

“That last year's Resolution be re-affirmed with regard to the Vaigay Valley Railway, namely, that (see page 85, U. P. A. S. I. Proceedings, 1910, at foot), and that the Madura District Board be again addressed, as the terms of the agreement between the Secretary of State and the South Indian Railway are now known.

The CHAIRMAN.—I just wish to ask you, Mr. Martin, if you have seen any copy of the contract between the Secretary of State and the South Indian Railway.

Mr. MARTIN.—No, but the Editor of the *Madras Times* has, because he has commented upon it.

The Meeting then went into Committee.

[IN COMMITTEE].

The CHAIRMAN.—Mr. Martin, how is this question affected by the division of the Railway Cess between the Madura and the Ramnad District Boards?

Mr. MARTIN.—It won't affect or interfere with the matter at all. They have each their share of the Cess.

The CHAIRMAN.—Does this Resolution apply to both District Boards?

Mr. MARTIN.—No, only to Madura.

Mr. F. M. HAMILTON.—Will the South Indian Railway build the Railway?

Mr. MARTIN.—The idea originally was that the Railway should be made by the South Indian Railway, but they delayed so long that eventually the Madura District Board said that they would do it, and for that purpose a Railway Cess has been collected for some years. The money will be forthcoming, because the District Board has the power to go on collecting the Cess as long as is necessary, so that it is not a question of funds that is keeping them back, but the agreement between the South Indian Railway and the Secretary of State. The terms of that agreement are known, so that they cannot bring that forward as an excuse any longer.

Mr. F. M. HAMILTON.—You wish to force the hands of the District Board as to whether they will go on with the project.

Mr. MARTIN.—Yes.

Mr. F. M. HAMILTON.—What is the distance altogether?

Mr. MARTIN.—About 100 miles (Mr. Martin then read the remarks on this subject that he made at the Meeting last year).

The CHAIRMAN.—I may say that as far as this particular line is concerned, it has strong local support, besides that of the planters.

Mr. F. BISSETT (Central Travancore).—I think that they are bound to build the Railway in time, because they have been collecting the Cess for many years, but we want to hurry them up a bit.

The Resolution was then put to the vote, and carried and confirmed in Open Meeting.

[IN OPEN MEETING].

ANAMALAI GHAT TOLL CHARGES.

Mr. BARBER (Anamalais).—There is a matter that I wish to bring up at the request of the Anamalais Association. There is a toll-gate at the foot of our Ghât where by some arrangement Rs.2 is charged on every four-wheeled vehicle that goes through the toll-gate. We have written to the authorities with a view to get this charge remedied, but we can't do it. Is any Resolution on the subject necessary?

The CHAIRMAN.—If you wish to invite discussion, you must have a Resolution. If you only wish to state a fact, no Resolution is necessary.

Mr. BARBER accordingly moved the following Resolution :—" That the Secretary do write to the Executive Engineer, Coimbatore, asking hat the charge of Rs.2 for a four-wheeled vehicle may be reduced at the Vamthorai Ghât Road."

Mr. A. K. W. DOWNING (Nilgiris) seconded the Resolution.

[IN COMMITTEE].

The CHAIRMAN.—Mr. Barber, I think I heard you say that you had taken steps locally to remedy the matter. With whom did you communicate?

Mr. BARBER.—With the Executive Engineer.

The CHAIRMAN.—Does it lie with him? Should you not address the District Board?

Mr. BARBER.—No, it has nothing to do with the District Board. The toll-gate is a P. W. D. toll-gate.

The CHAIRMAN.—Has the P. W. D. special toll-gates of its own?

Mr. BARBER.—It is at the foot of one of their own roads.

The CHAIRMAN.—Is the road kept up by the P. W. D. out of Provincial Funds?

Mr. BARBER.—It is run by the P. W. D. If you try to get through the toll-gate without paying, you get a letter from the Executive Engineer (laughter).

Mr. ABBOTT.—On the Tambracherry Ghât, the P. W. D. have had all the toll-gates handed over to them for the maintenance of the road.

Mr. BARBER.—This is a different case. Here the P. W. D. collect the tolls and hand them over to the District Board.

The CHAIRMAN.—Is this a boundary toll-gate between two Districts?

Mr. BARBER.—No, it is a toll-gate at the foot of our Ghât.

The CHAIRMAN.—Was there not some special arrangement about it?

Mr. BARBER.—Yes, the rates when they were fixed were referred to the Planters' Association, but they were not using four-wheeled vehicles then. Now they are using four-wheeled vehicles, motor cars and trollies, and they find the heavy toll a nuisance.

The CHAIRMAN.—You know what our rule is: we do not care to take up a matter of purely local grievance until the local Association has done all in its power to get redress.

Mr. BARBER.—Would you like me to read the letters?

The CHAIRMAN—Yes, I think you might.

Mr. BARBER accordingly read the letters that had passed between the Anamalai Association and the Executive Engineer.

The CHAIRMAN.—I think that it would be better if in this matter you addressed the Government yourself first.

Mr. BARBER, with the consent of his seconder, then withdrew the Resolution.

[IN OPEN MEETING].

RAILWAY TO THE WEST COAST.

Mr. BALL (Coorg) said that he wished to bring the following Resolution before the Meeting :—

“That this Association once more draw the attention of the Government of India to the want of direct Railway connection between Mysore and the West Coast, and views with concern and alarm the fact that the terms of the new agreement about to be made with the South Indian Railway will debar private enterprise from undertaking one of the quickest and surest means of adding to the wealth and economical progress of the country.”

He would not detain them by going over old ground, but they had been fighting for that Railway ever since 1884. They had received the most sympathetic replies from the Local Government. They told the planters that they would have to raise a Cess to pay the interest on the capital required, and the planters and others consented to do that. They were then told to approach a private company. He had only read that day of the new factor in the situation, the agreement with the South Indian Railway which would prevent private enterprise from undertaking the project. He did not think they ought to allow this agreement to pass without a very strong protest.

Mr. DANVERS (N. Mysore) seconded the Resolution, which was carried.

GHAT ROADS IN PLANTING DISTRICTS.

Mr. ABBOTT (Wynaad).—I have been instructed to bring forward the following Resolution :—

“That the Government of Madras be asked to undertake the upkeep of all Ghat roads leading out of planting districts out of Provincial funds.”

There are several Ghat roads in the Wynaad. In addition to those kept up out of Provincial funds, four or five roads have to be kept up by the District Board, and this is a terrible drain on the District Board funds in our District. There is a very heavy traffic on these roads, a large proportion of it timber from Government Forests, and they get into a very bad state.

Mr. BARBER seconded the Resolution.

[IN COMMITTEE].

Mr. DANVERS (N. Mysore).—As regards our own roads from Mysore to the West Coast, they are excellent as long as they are in British territory and they are beautifully kept up. It is only when they come into Mysore territory that they get bad.

Mr. ABBOTT.—I made no complaint as to the state of the roads. I merely said that they cost the District Board a lot of money which it is very hard for them to find.

The Resolution was passed in Committee and confirmed in Open Meeting.

The delegates then adjourned for the day.

Second Day, Tuesday, August 29th.

The Delegates met at 11 a.m., when the subjects under the heading of Legislation were discussed.

Preventing Thefts of Tea, &c.

The CHAIRMAN.—I have received no notice of any Resolution on this subject. Has any gentleman anything to put before the Meeting?

The subject was allowed to drop.

The Scientific Officer.

THE LABORATORY.

The Scientific Officer reported that the Laboratory was in working order.

THE LIBRARY.

The Scientific Officer asked that the Meeting would sanction the same grant for the Library as it did last year, namely, Rs.200.

The grant was sanctioned.

THE STAFF.

The Scientific Officer said: "I don't think I have anything to say about the staff. My staff must depend on what is done in connection with the next item on the Agenda." (Scientific Officer's Assistants). My present staff consists of a writer, who annually applies for an increase. He has done so again this year; but I am not prepared to recommend that his salary be increased.

Scientific Officer's Assistants.

The CHAIRMAN.—Gentlemen in order to refresh your memories, you must allow me to take up a good deal of your time in reading the various proposals that have come before this Association, and some notes on the subject by Agricultural Advisers to Government.

The proposals made by Mr. C. H. Browne, of the North Mysore Planters' Association, the late Mr. R. D. Tipping, as Chairman of the U. P. A. S. I., and letters from Mr. M. E. Couchman, Director of Agriculture, Madras, and Mr. C. M. Hutchison, of the Pusa Agricultural Institute, were then read to the Meeting.

Mr. DANVERS (N. Mysore) opened the discussion on the subject with the following speech:—

"Mr. CHAIRMAN and GENTLEMEN,—As you have all heard, a proposal has emanated from the North Mysore Association, that a Scientific Department should be formed with trained Assistants in

each District, under Mr. Anstead as Chief Director. This proposal was brought forward by Mr. C. H. Browne, a planter of light and leading, in a speech which I think everyone has seen, and which has just been read by the Chairman, and was immediately adopted by all the intelligence of Mysore. It may be because Mysore is one of the oldest Planting Districts, and so has had more time than some others to develop problems; but I am proud to think that Mysore has always been to the fore in seeking the aid of science, and I am proud to be able to state to-day that Mysore has completed its arrangements for the employment of an Assistant to Mr. Anstead, details of which will be laid before you later on. One other Association, the Malabar Coast, appears to have also grasped the greatness of the idea, and risen to the occasion—and I congratulate it on a wise and momentous decision. I am not clear, however, as to whether it is running its Assistant ‘on its own,’ or whether it intends to be incorporated with the Scientific Department that we of Mysore hope to see inaugurated at this Meeting.

“It would be a work of supererogation to descant at this late hour on the advantages of scientific help in agriculture or planting. Their experience of its value is daily acknowledged by American farmers, and in parts of Europe agriculture has been practically saved from extinction by science. The appreciation of scientific aid by the planters of the West Indies and by their go-ahead brothers in Ceylon, and the grateful acknowledgments of tea planters in Northern India, all speak more eloquently of its value than any words of mine could do. We, too, have secured the services of a planting expert. I will, therefore, leave the plainly obvious to take care of itself, and will pass on to what should be, but does not appear to be, equally obvious to all—and that is the necessity of the full application of the principle to ourselves. I do not for a moment mean to say that any District does not appreciate the value of our Scientific Officer—far from it. The enormous increase of correspondence with him, and the general demand for visits from him, show the widespread appreciation of him that exists. And that brings me to my point, which is that we are wasting him, inasmuch as we do not get his full value from him, and we shall shortly either kill him or lose him. For the last two years he has been kept on the move in all directions and can have had little of either physical or mental rest. Perhaps it has been right that he should have gone to and fro, and up and down, learning his country and—his man. Some one said of the British that each islander was an island in himself, and if you add that each of these islanders lives on an island by himself, you get somewhere near the average South Indian planter. Such an individual takes learning; he has his qualities and the defects of his qualities; and, as I said, it is, perhaps, as well that the last two years have been spent as they have been. But the time has come for a change, and instead of killing our Scientific Officer, or otherwise losing him, we must supplement him by trained Assistants. We have at present a man who does not spare himself, and we must spare him. We are wasting him, I repeat. We have a brain and a keenness at our disposal that should be now employed doing something worthy of both, and that should not be allowed to waste time in trains or rust in bullock carts. We have also a Laboratory, obtained with vast trouble, though at small cost, which likewise must be greatly wasted if things are not altered; again, we may kill our man, driving the willing horse to death; but I am not so apprehensive of that, as I think we are more

likely to lose him after wasting him. Our Scientific Officer belongs to the Government of India, and that Government may very well say at the end of this present term:—‘We lent the planters of South India a man with a brain, and they have mainly used his legs. We have cast our pearls before swine, and we will gather them up.’

“Another point that we must consider is this. Neither our present nor any succeeding Scientific Officer can be considered as a machine which we have bought with our money, to let lie till it rust, or work till it burst. He is, and any successor will be, a man with at least average ambition; and you cannot expect to retain knowledge, brain and keenness unless you make it worth while to the possessor of these qualities. No man who feels that he is fitted for higher flights will remain contentedly jogging along railway tracks and bandy roads, nor will any one with a turn for research, work contentedly and spend his life answering questions which any student of the scientific A. B. C. could do. We must give the head of our Scientific Department work to do that will be worthy both of him and of ourselves. We must provide an Assistant to that head who will take the road work and the spade work off his hands, and who will always be at hand to guide us and advise us and jog our elbows. I lay great store by that same jogging of our elbows. Dr. Lehmann used to say:—“‘What you need is experiment, and experiment, and experiment.’ But though often enthusiastic in company, when we, islanders, get back to our islands the glow of enthusiasm is apt to fade and the experiments are either not made or made half-heartedly. Then should our elbows be jogged. And who is to do it but the Assistant Scientific Officer we should have always with us? A little bird once whispered to me that certain people said:—‘If the Mysore men want an Assistant Scientist, let them have one, it will give us more of Anstead.’ No greater mistake could possibly be made. I will personally guarantee that the equivalent of any time which the Planting Expert has devoted to Mysore in the past will be more than filled up with Mysore affairs in the future. We have recognised this ourselves by budgeting for increased office expenses on account of the anticipated increase of work.

“I will not use any further arguments, for Mr. Anstead has put forward many, and in much stronger words, in the various references he has made to the scheme, and I think I have said enough to show the views of the Mysore Associations; but I will repeat my congratulations to those who have grasped and given form to the great and momentous idea, and I appeal to those who have not yet done so to think again. Let them look upon scientific aid as an investment, likely, if we may take universal experience as a guide, to bring in a large return. The capital needed is very small, the dividends are likely to make the most flourishing Rubber Company envious. Let them look upon it also as a policy of insurance against possible diseases, the returns on which are impossible to estimate, and the value of which to us we may never know. Let those once threatened with ‘pink disease’ imagine the possible loss had not an expert been at hand to check its advance. Let them take pencil in hand, and give on one side the cost of the Scientific Officer to them, and on the other side the possible loss if the disease had been allowed a free course. Let them also think whether a further small increase in the cost of the Scientific Department will

Mr. ANSTEAD.—Of the 8-anna cess paid, 6 annas would go to the U. P. A. S. I. and 2 annas would run the local Association. Surely it could find the Rs.50 to go towards the Hybridisation Scheme?

Mr. DICKINS.—We would not have much of a balance from our 2 annas. We should lose a certain amount of acreage.

Mr. N. G. B. KIRWAN (Bababudins) asked if the Secretary could give him any information as to the coffee acreage represented on the Association, so as to work out the cost of the Hybridisation Scheme.

Mr. ANSTEAD.—Would it not be possible to work the Hybridisation Scheme out of a general fund and take it away from the U. P. A. S. I. fund?

The CHAIRMAN.—We have often found in past years that the full effect of a Resolution is not quite understood. I think, therefore, that I am hardly out of order in giving my opinion as to the real meaning of this Resolution. It does not commit any other Association on the definite question. At the same time I think that we would find, if we pass this Resolution, that we do commit ourselves to the opinion that the scheme is a good one and one that it is desirable that we should try to carry out. It commits you to nothing but an expression of opinion that the scheme is a good one and is desirable.

Mr. BARBER (Nilgiris).—I want something definite to take back to my Association. This Resolution, as you say, is not definite.

The CHAIRMAN.—Are you prepared to accept a definite scheme?

Mr. BARBER.—No, but we should like to take a definite scheme back.

The CHAIRMAN.—Mysore has prepared a definite scheme and is prepared to carry it out. If any other Association is not prepared, we cannot bind Mysore to withhold their scheme in favor of any other.

Mr. DANVERS (N. Mysore).—May I point out to Mr. Barber that a perfectly definite scheme was outlined by our late Chairman? In that he will find the total probable cost of providing assistants. As regards the cost to each individual Association, it is a matter that they must work out for themselves. If the Shevaroyis require a whole time assistant they would probably have to pay a rupee an acre; but if they amalgamated with the Nilgiris they would find that they would get the services of a Scientific Assistant for about 4 annas or 5 annas per acre.

Mr. DOWNING.—I take it that the Mysore scheme is on the lines of the late Chairman's scheme?

Mr. DANVERS.—It is based on it. There is a definite sum required for an Assistant. We hope that we have squeezed in enough acreage to pay the cess to cover this cost.

Mr. BARBER.—That is just what I want to arrive at. If we have not enough acreage for a 6-anna cess, we might have to pay 8 annas, 12 annas, or even a rupee. I want to warn my Association.

Mr. ANSTEAD.—The scheme of the late Chairman was based on the whole acreage of the U. P. A. S. I., leaving out Kanan Devan. It was the only acreage that we could go on. If the Nilgiris find that it will cost them more, they have the choice of two things, either pay or get a partner. If they can get a suitable partner, the cost to them might come down to 3 annas.

Mr. BARBER.—There is nothing in the late Chairman's scheme about that.

Mr. ANSTEAD.—The very fact of the Anamalais and the Wynaad standing out has spoilt that scheme. He could only hope that every one would come in. It was only a starting point.

The CHAIRMAN.—We were just now asked for the acreage of coffee represented by the Association, and the cost of the experimental plot. The figures are 52,300 acres, and we have to make Rs.350, which means a subscription of 1½ pies per acre. Of that Wynaad has generously promised to provide Rs.50, though they have no coffee left.

Mr. ABBOTT (Wynaad).—We were prepared to subscribe up to Rs.50 provided other Associations came in. I don't think my Association will stick at that.

Mr. DANDISON (Nilgiris).—I should like to ask if the investigations will be published or not. If so, it seems unfair that those that don't subscribe should get the benefit.

The CHAIRMAN.—I don't think we have any wish to be secret in our affairs. The general investigations will be published.

Mr. DANVERS (N. Mysore).—I don't see any object in keeping the eyes of the world off the benefit of the research work of our Scientific Officers. I think that we should uphold altruistic principles in such assemblies and those who don't come into the scheme may derive what benefit they can from it.

Mr. ABBOTT.—As this is in Committee, I should like to say that we have all paid our share towards the Scientific Officer. Some have subscribed more than others it is true, and if in the first instance we do not find ourselves able to fall in with the Mysore scheme we still have some claim on the Scientific Officer. I don't think that he is adopted by the Mysore Associations altogether.

Mr. DANVERS said that his remarks could hardly bear such a meaning.

Mr. F. M. HAMILTON (S. Mysore).—I should like to know when the question of the details of our scheme will be gone into.

The CHAIRMAN.—No details will be discussed at this Meeting. The scheme affects Mysore only, and they must thresh it out amongst themselves.

Mr. F. M. HAMILTON.—The assistant will be employed by the U. P. A. S. I., so that all negotiations and discussions as to pay, &c., will have to be through this Association. I should like the Meeting to know our view of it. As this Association employs the man, it, presumably, will have to give the guarantee.

Mr. ABBOTT (Wynaad).—I don't know whether it is for us to make any suggestions. If so I would like to suggest that if we get an assistant, it would be a good thing to have him employed as a beginner in Government service. If not, a scientific man will always try to get into Government service. We all saw what happened in Mr. Mann's case. He was employed by the Indian Tea Association, but as soon as he could do so, he went into Government service.

Mr. ANSTEAD.—It is a difficult matter. The Government of India are not very anxious to take men into their service after a certain age, and that age is a young one. They are not very keen on taking men over 30 years of age into their service. Mr. Mann's was a special case. He was in a higher position.

Mr. ABBOTT.—My objection is rather to the head of the Department and not only the assistant.

Mr. ANSTEAD.—Before I came out to work here, I was in the Colonial service. When I was recommended for this appointment there was a good deal of opposition. It was said that I was keeping out better men owing to my age. I don't think that you will lose your men.

Mr. F. M. HAMILTON (S. Mysore).—Would it be necessary to put a Resolution that the Scientific Assistant would be under the U. P. A. S. I., or should it be taken for granted that this Association will employ him and guarantee the funds.

The CHAIRMAN.—I think that it is fully understood that any assistant that it is decided to employ will be engaged and controlled by the U. P. A. S. I. through the Scientific Department. That implies that the U. P. A. S. I. will guarantee to pay his salary, &c., the Association in turn taking a guarantee from Mysore.

Mr. ANSTEAD.—On the other hand if you get a Government man, it will necessitate the Government choosing him. I think that it is part of the scheme that we should choose our own man.

Mr. DANVERS (N. Mysore).—While we have no fault to find with the man that the Government has already chosen for us, I think it would be better, if the Assistant is to be placed under the orders of Mr. Anstead, that he should be selected by him and paid by the Association.

The CHAIRMAN.—As there is no definite amendment proposed, I think we will put the Resolution in Committee. I have already told you the effect of the Resolution. You don't bind yourselves to employ an Assistant, but you express the opinion that Mysore has done well and that you will consider whether you will follow her example.

The Resolution was carried in Committee.

[IN OPEN MEETING].

Before it was confirmed in Open Meeting,

Mr. DANVERS (N. Mysore) said: "Before you put the Resolution to the Meeting, Sir, I would like to express my appreciation of the sympathetic manner in which the Resolution has been received by

the delegates present. I quite understand that, apart from the financial question, there are practical difficulties which prevent some of the delegates arriving at a definite conclusion. I can only hope that they will be convinced by the things that they have heard to-day and that it will be like seed dropped on good soil. I do not know whether it is necessary to mention what a man said to me about Mr. Anstead. He said:—‘It is all very well while you have him, but what would happen if he went? You may not get another such man, and then your scheme is bound to fail.’ I can only answer by saying that while some men are highly desirable, no man is absolutely indispensable, and while I highly prize the fish that we have caught, I refuse to believe that there are not as good fish in the sea as ever came out of it. I think we may trust the Government who provided us with our present expert (and our grateful thanks are due to them for the class of man they chose) to do well for us again when the need arises. But I would emphasise my opinion that this entirely depends on the way in which we treat our present officer. To me there is a veiled threat in Mr. Couchman’s letter. If we overwork him till he breaks down, or if he has his hands tied and his efforts stultified, and if he has to waste himself on cooly work, we shall find that the Government will have great difficulty, if they do not find it impossible, to procure first-class men for the post. Let us have a Department that gives capable men a chance to distinguish themselves as well as to serve us, and we shall find no lack of available applicants—and we shall also find our money put out to advantage. If we spoil the ship for a ha’p’orth of tar, we shall find ourselves sailing in a rotten bottom of ludicrous aspect, and will not only get a poor return for our money, but be the laughing stock of the civilised world.”

“I wish we had Mr. Richardson’s genial presence and powerful advocacy here, but as that cannot be, we will get a glimpse of him through the medium of the *Rubber World*. At an interview that paper’s representative had with him in July—I am sorry I have not the paper now with me, and must quote from memory—the interviewer asked if there were any diseases to combat, and Mr. Richardson said: ‘Not many—pink disease had yielded to treatment with Bordeaux mixture, and we have a distinguished mycologist in Mr. R. D. Anstead, who will have local assistants to work with him, so that we are prepared to grapple with such diseases as may appear.’ These are the words, and, gentlemen, you may be certain diseases will appear, and the statement quoted above was no doubt based on Mr. Richardson’s inability to imagine that the proposition to obtain assistants would ever be allowed to lapse by any Association. I can only ask District Associations now to give the scheme further consideration. As I have said, I recognise they have difficulties apart from financial ones, that prevent delegates now from definitely accepting the scheme; but I hope, we all hope, that they will be able to overcome them.

Mr. ANSTEAD (Scientific Officer) said that before they passed to the next subject he would like to congratulate North Mysore on being the first to take once more a large step forward. He was looking forward ten, fifteen, twenty years, and he thought that he could see at the end of that time a Scientific Department in South India such as would be envied in other parts of India and such as would take its place among the leading Scientific Departments in the British Colo-

nies and other civilised countries with large agricultural interests. This Association had made in a short time two important forward movements, one when it appointed a Scientific Officer and another when it provided him with a Laboratory. It was now advancing another step, and he felt confident that when they met in twelve months' time they would see the effect in Mysore of the Assistant scheme, and that the appointment of other Assistants would push the Department a few more steps forward.

The CHAIRMAN.—I cannot definitely close the subject, so I propose to postpone further discussion on the details until the last day. The only thing that occurs to me that will have to be done is to pass a formal Resolution authorising the U. P. A. S. I. to engage a man.

Scientific Officer's Programme for 1911-12.

The CHAIRMAN.—Last year you appointed a Sub-Committee to draw up a Programme for the Scientific Officer. Is it your wish that this should be done again this year? Is any one prepared with a definite proposal?

Mr. DOWNING (Nilgiris) said: "My Association considers that it would ease the work of the Scientific Officer if no detailed programme of tours is made out for the year, for we all realise the great strain the constant travelling entails, for though of course we should all like to see more of our Scientific Officer, we do not think any good purpose can now be served by his travelling all over the country and having to spend so short a time at headquarters, where, we think, now that he is conversant with the general conditions of the various Districts, his time would be more profitably employed in the investigation of the best methods of dealing with our various fungoid and insect diseases and pests. I would beg to propose:—

"That when an Association requires the services of Mr. Anstead, at least a month or six weeks' notice be given beforehand to the Chairman, through the Secretary, U. P. A. S. I., to enable him to consult with Mr. Anstead and arrange for a tour in the District requiring the Scientific Officer, and that should more than one District desire his presence at the same time, the one whose application was first received in the office should have the preference."

Mr. ABBOTT (Wynaad) seconded the Resolution.

[IN COMMITTEE].

Mr. ABBOTT (Wynaad).—The Resolution is so nearly on the lines of that that we passed at my Association recently that I should like to read it. It ran as follows:—

"That this Association, fully recognising the immense amount of travelling that has to be done by the Scientific Officer, and having no special work for him in this District at the moment, does not press for a visit from him during 1911-12, unless any unforeseen emergency crops up. If such emergency happens, we as subscribers to the fund are of opinion that Mr. Anstead would help us by a personal visit."

I think that it is almost in complete agreement with Mr. Downing's Resolution.

Mr. P. G. TIPPING (Coorg).—Our Association is of opinion that Mr. Anstead has done all the touring that is necessary for him to get to know the men and the Districts, and that his time would be better employed in research work at headquarters. We are quite in agreement with the Resolution that has been brought forward.

Mr. ANSTEAD (Scientific Officer).—I am entirely in sympathy with the Resolution. It is exactly what I want. I feel that I am wasting my time in constant touring, so that this meets my views entirely. If an Association wants me, it must give a month's notice. I would only add that I should only go if the circumstances disclosed that it was absolutely necessary for me to go. I am often asked to go and look at some disease or pest—mosquito blight, for instance. I cannot tell you any more at present than Mr. Antram has told you in his book. I might, if I was given a year or two to study the subject. If I was asked to go and look at mosquito blight, even if a month's notice was given, I should feel it incumbent on me to point out that it was utterly unnecessary.

I take it also, that under this Resolution, if I consider it necessary to make a tour I can go to any district for a certain purpose even if I am not asked for. I may have something at the back of my head, about which I may want to consult North Mysore, for instance, and nobody but North Mysore; I should like to go and talk it over with them, even if they don't ask me to. I take it that the Resolution does not bar me out of going there, even if I am not asked for.

Mr. F. M. HAMILTON (South Mysore).—There is another question to be settled. I think that an Association that pays a larger sum towards the Scientific Officer Fund has a better right and prior right to the assistance of Mr. Anstead than an Association that pays such a small sum that it barely covers his travelling expenses.

The CHAIRMAN.—We have considered that question. Your proposal would be a distinct hardship on the smaller Associations. Each Association pays what it can, and we should do the best we can for them all.

Mr. ABBOTT (Wynaad).—It might be that some small Association might have some appalling disease in its midst. I think that it would pay us all in the long run to have Mr. Anstead go there immediately to attend to it.

Mr. DANVERS (North Mysore).—I think Mr. Hamilton's objection applies to the past and not to the future.

The Resolution was carried in Committee.

Mr. BARBER.—With reference to the right of subscribers to the Scientific Officer's Fund who are not members of any Association, to the services of the Scientific Officer, referred to on page 2 of the Secretary's Report, the Nilgiri Association desires to bring forward the following Resolution to the effect :—“ That Honorary Secretaries be in no way bound to make arrangements for the Scientific Officer to visit non-members, or to guarantee that such visits shall be made,

but that should a non-member who has subscribed to the Scientific Officer Fund intimate to an Honorary Secretary that he desires a visit, it is the duty of the Honorary Secretary to consider that request, on its merits."

The reason for it is this. In the Nilgiris we have some 30,000 acres under cultivation. I think 24,000 acres are under European management, and of this only 16,000 is represented by the Association. We are not at all keen on others climbing into the benefits of this scheme on other people's shoulders.

Mr. PLOWDEN (Malabar Coast Planters' Association) seconded the proposal.

The CHAIRMAN.—I scarcely think that we can dictate to Honorary Secretaries as to what they should do.

Mr. ABBOTT (Wynaad).—I think that we ought to adopt Mr. Brock's ruling as a substantive rule of the Association, leaving out paragraph 2, because Mr. Anstead's programme is not now laid down at the Annual Meeting. I think that Mr. Brock's ruling does all that Mr. Barber suggests.

Mr. BALL (Coorg) seconded the amendment.

The CHAIRMAN.—Under the general rules we must take the amendment first. Mr. Brock's rule makes it obligatory on Honorary Secretaries of local Associations to entertain such a request on the part of a non-member of the Association. Of course there is the possibility that an Honorary Secretary may refuse to do this, and we have no power to make him. If we adopt Mr. Brock's ruling, we must do so.

Mr. BARBER.—If we leave outside subscribers to make their own arrangements, it must lead to a disarrangement of the tour. It would practically be impossible for two men to arrange a tour. It must be done by one; therefore, I think the duty must rest with the Honorary Secretary of a local Association.

Mr. ABBOTT, with the permission of the seconder, and with the permission of the Meeting, withdrew his amendment.

The original Resolution, put by Mr. Barber and seconded by Mr. Plowden, was therefore the only subject before the Meeting.

Mr. ANSTEAD, on being asked to state his views, said: "I find it very difficult to say anything. It seems to be none of my business. I don't quite see how a non-subscriber to an Association is going to make his own arrangements. May I state the facts of the case that brought this matter up? I was making a tour in a certain District. The Honorary Secretary had arranged the programme. It was all cut and dried from day to day, and I was tied down to fixed times, otherwise the arrangements would have been hopelessly thrown out. I had to carry out the programme as it was cut and dried, otherwise I would be putting everybody to inconvenience. In this case the programme was arranged and I began to carry it out. In the course of the tour I met Mr. X, a subscriber to the Scientific Officer's Fund, but not a member of the Association, in a friend's bungalow. He

said to me: 'Will you come to my estate?' I pointed out that this arrangement was not in my programme. He replied: 'The programme has nothing to do with me. I want you for a couple of days on my estate.' I told him that it was impossible to throw out the arrangements made, and so I must decline. I accordingly went on my way and carried out the programme according to the instructions I received. We want some rule that will prevent this class of case occurring. How to do it, I don't know."

Mr. BARBER.—Mr. Anstead has put the case of the gentleman in question. I would like to ask, was he a member of the District Association and resigned because Mr. Anstead did not comply with his wish?

Mr. ANSTEAD.—I don't agree. I understood that he resigned for another reason, and before I was there. He resigned because they raised his assessment.

Mr. BARBER.—Did you visit his Estate?

Mr. ANSTEAD.—Yes, the year before, when he was in England.

Mr. BARBER.—He seems to expect you to visit it every year.

Mr. ANSTEAD.—I cannot say.

Mr. DANVERS.—I am sorry that the amendment has been withdrawn. With all respect to Mr. Barber's Resolution, from my point of view for getting the thing done easily and without hitch, Mr. Brock's ruling was the best. I don't know if the difficulty would be solved by fixing some date after which it would be impossible for the Scientific Officer to visit any Estate.

Mr. F. M. HAMILTON (S. Mysore).—Must the Scientific Officer take instructions from an individual or must he go to the Honorary Secretary? Surely it is not possible for an individual to write to the Scientific Officer and ask him to visit his Estate? As far as I can see, the Honorary Secretary cannot take cognizance of any man who is not a member of the Association.

Mr. DANVERS.—I think we should appeal to Honorary Secretaries to swallow their dislike. I sympathise with the Resolution, but I don't see how it will work.

Mr. ANSTEAD.—Perhaps the new arrangement regarding my tours will eliminate the necessity for any Resolution. My tours will be arranged beforehand, and I can take things more leisurely.

Mr. MARTIN (Kanan Devan).—There is a deeper principle involved. This is an Association of Associations, and as such we are bound to support an Association as against an individual outside the Association.

Mr. KIRWAN (Bababudin).—A case may come up under the new scheme of a gentleman leaving the Association. Who is going to collect his subscription?

The CHAIRMAN pointed out that it had been represented that the acceptance of the first subscription through the Association implied a contract that the subscriber was entitled to the services of the Scientific Officer. The local Association must take the subscription and forward it.

Mr. BARBER.—It was suggested that the subscription might be made direct to this Association.

The CHAIRMAN.—The contract was made through the District Association.

Mr. DANVERS.—I was rather struck with what Mr. Martin said just now, that we should support the Association against the individual. The suggestion made just now has rather staggered me. I quite agree with Mr. Martin, and I think as the Central Association we should support local Associations by declining to allow individuals to make arrangements with this Association direct.

The Meeting at this stage adjourned till 3 p.m.

On resumption of the Meeting at 3 p.m., Mr. Barber read an amended Resolution.

The CHAIRMAN.—Does the Meeting consent? Mr. Barber proposes to withdraw the original proposition and to submit the following:—

“That Honorary Secretaries be in no way bound to offer to make arrangements for the Scientific Officer to visit non-members, or to guarantee that such visits shall be made, but that should a non-member who has subscribed to the Scientific Officer Fund intimate to an Honorary Secretary that he desires a visit, it is, in the opinion of this Meeting, the duty of that Honorary Secretary to consider his request on its merits.”

Mr. ANSTEAD.—Will you explain how it will meet the case which raised the whole question?

The CHAIRMAN.—The onus of finding out when the Scientific Officer is due lies on the non-member, the Honorary Secretary is not bound to circulate the information to him; but as it is generally published beforehand in the *Planters' Chronicle* there will be no difficulty in finding out. Then should a subscriber, who is not a member of his District Association, intimate to the Honorary Secretary of the local Association that he wishes to see the Scientific Officer, I consider that it is the duty of the Honorary Secretary to place such a request on the same footing as a request made by a member of the Association.

Mr. ANSTEAD.—Suppose he does not, what happens?

The CHAIRMAN.—I am afraid that we cannot legislate for such a point as that.

The Resolution was carried in Committee and confirmed in Open Meeting.

[IN OPEN MEETING].

Imperial Preferential Tariff.

The following Resolution, proposed by Mr. E. F. Barber and seconded by Mr. F. M. Hamilton, was unanimously passed without any discussion:—

“That this Association do confirm last year’s Resolution on an Imperial Preferential Tariff.”

TWO SUBJECTS DROPPED.

The Anti-Tea-Duty League and the proposed Coffee Cess and Popularisation Scheme were dropped without any discussion.

Export Duty on Bones, etc.

Mr. DANVERS (N. Mysore) said:—We have made more than one attempt in the past to induce Government to place an export duty on bones, and have failed. Probably, our next attempt will fail, too, as Government is not sympathetic in this matter; but I think that the time has come to make a further effort. Every year this necessary manure becomes scarcer and dearer, as competition for it grows, and though the export trade is said not to be increasing, there is no question that the local demand is. It appears from the report of the January Meeting of the Legislative Council of India that the Hon’ble Mr. Dadabhoy asked whether, since Dr. Voelcker’s Report on Indian Agriculture, any steps had been taken to arrest the export of oil-seeds and oil-cakes from the country, and whether Government proposed to devise means for the utilisation of bones in India, and of preserving these manures within the country. Shortly put, the Hon’ble Mr. Carlyle answered all points in the negative. Government had not taken any steps to arrest the exportation of oil-seeds and their products, had decided, after enquiry, not to make any grants to encourage factories for their treatment, and did not contemplate discouraging the Indian agriculturists from utilising the oil-seed produce in the manner which he considered most profitable to himself.

As regards bone manure, Mr. Carlyle thinks that “its value is not so well established as that of oil-cake, but the Agricultural Departments have published the results of experiments, showing where this form of manure is profitable. The fact that it is so little used is believed to be due not to the export trade, but mainly to the want of a cheap supply of sulphuric acid to dissolve the bones. The export of late years has not shown any marked tendency to increase, and in any case Government do not consider themselves justified in interfering with the trade. Such are the views of the Government of India, and they are not encouraging.”

This answer was used to meet and defeat a Resolution brought forward in the Legislative Council of the United Provinces, asking the local Government to discourage the export of bones from those Provinces. I am not in sympathy with that Resolution, as I believe in free inter-Provincial trade; but the discussion was an interesting one. Among other things, it disclosed the fact that the Railway rate for the carriage of bones to seaports was less than on other commodities. The Hon’ble Mr. Bose quoted the local Agricultural Officers to the effect that the manurial value of phosphatic manure. had not greatly increased the yield of wheat, cotton, or maize in the United Provinces and that to stop the export of bones on the ground of their manurial value would be decidedly premature. Now, as

regards this last point, we have decided from long experience that the value of bones to us is great, and we want to procure them as cheaply as possible. The same remark applies to oil-cakes. The Hon'ble Mr. Carlyle's remarks on the point of leaving the Indian agriculturist to make his profit in his own way seems open to criticism. Some of his ways are excellent, and founded on a long experience which Western theories and Western practice unsuccessfully attack. But some of them are not so excellent, such as his practice of burning cattle manure for fuel; and Agricultural Departments have been established to encourage him, among other things, to discontinue many of his ways; and it might probably pay him better to use the manures on his holding. In any case, he might be encouraged to sell them to his neighbours within India. As regards factories, we in Southern India at any rate have enterprising firms, which prepare bones and oil-cake for agricultural use. Government might encourage the importation of sulphuric acid, and so reduce the objection that it is prohibitively expensive.

The Hon'ble Mr. Carlyle stated that the export of bones was not increasing to any marked extent, but I shall be surprised if the "Trade of India Review" for the past year does not show an increase. I have only seen the Review of 1909-10, in which the exports of bones are put down at £363,002 for 1907-08, £345,235 for 1908-09, and £357,909 for 1909-09, or, say, an average of 100,000 tons, while the values of oil-cakes for the same periods are respectively, £501,160, £597,608 and £553,365. Of this last sum, fodder oil-cakes account for, roughly, £365,500, and oil-cakes for manurial purposes £187,800. Ceylon took over Rs. 9 lakhs, or £60,000 worth, say about 15,000 tons. The leading West Coast firm informs me that whenever the price of bones and oil-cakes rises to any great extent, as it did last year, the cause is directly due to the operations of those who are buying for export to Ceylon and elsewhere. Bones seem to go even to Australia, which sounds to me like sending coals to Newcastle. Last year, many planters could not get manures when they wanted them, and had to wait three or four months.

Now, in view of the large and increasing planting demand for bones and oil-cakes, and in view of the efforts of Government through their Agricultural Departments to induce the ryots of India to extend their use of fertilisers generally, and also in view of their action in exempting from import duty nitrate of lime and mineral superphosphates—for which we are grateful—I think we might again make an effort to further the cause of cheap manures, and beg to propose the following Resolution:—

"That negotiations be entered into with the principal suppliers of manures directed towards ascertaining the best means of discouraging the export of manures from India and of encouraging the manufacture of superphosphates, and that on sufficient information having been gleaned, and in view of the increased demand for, and increasing prices of, both bones and oil-cakes for manurial purposes in Southern India, and in view of the discouragement of Government's own efforts to induce agriculturists to adopt and extend the use of these fertilisers by the difficulty and cost of obtaining them, the Secretary do write to the Government of Madras asking them to give the matter their sympathetic consideration and to recommend to the Government of India the placing of an

export duty on both articles, and so supplement the helpful attitude the Supreme Government has already assumed by exempting all manures from the import duty leviable under the Indian Tariff Act."

Mr. BALL (Coorg) in seconding the Resolution, said that he had been asked to bring this subject up, but it had been in far better hands and it had been introduced in far better words than he would have been able to move it in. The only thing that he desired to call attention to was the export of fish from the West Coast. He did not know if the Resolution could be made to cover this point. Coorg not having a Railway and no means of getting it up, all manures were gradually leaving them. They were taken away. The freight to Ceylon was not much more than the cost at which they could land the stuff on their Estates, so Coorg was terribly handicapped, and he thought that it was only right that they should ask Government to help them in this matter.

[IN COMMITTEE].

Mr. LANGLEY, of Messrs. Plerce, Leslie & Co., Ltd., at the request of the Chairman, gave his views on the subject. He could hardly add, he said, anything to what Mr. Danvers had said and he could endorse everything that Mr. Ball had said about the export of fish manure. He had recently got the figures as to these exports. Mangalore had exported 9,000 tons, Tellicherry 6,000, Calicut 4,000 and Cochin about 5,000 or 6,000 last year, most of which, doubtless, had gone to Ceylon, but much of which had also gone to Japan. He might also mention that the Shipping Companies were having their attention drawn to the question of fish manure for Japan.

Mr. BERNARD (Messrs. Parry & Co.) said that many manufacturers in this country would prefer to do business in this country provided there was a sufficient demand; but there was not. There was not sufficient demand to keep places of importance going, so they were obliged to get rid of their surplus production abroad. What went out of the country corresponded exactly to what was not required in the country. As regards the export duty it seemed to him that as the supply of bones from India was no inconsiderable portion of the world's supply, the imposition of an export duty must have the effect of raising the rates abroad, and that was what regulated the price in India. From that point of view it had to be recollected that the Resolution would defeat its own ends. The local purchaser of bone meal could always be sure of getting his supplies at less cost than the purchaser abroad, because he always had the advantage of the steamer freights. So he could not see how the Government could interfere, having regard to the country as a whole.

Mr. N. G. B. KIRWAN (Bababudins) said that he did not understand how if prices at Home were put up, the prices in India would be enhanced. Who got the extra prices, their agents or who? He could not see how this should interfere with prices in India.

Mr. BERNARD.—The people delivering the bones get the benefit. The crushers got no more profit for crushing bones at Rs.50 a ton than when they were at Rs.25.

The CHAIRMAN.—Can you give us any idea as to whether local sales are increasing?

Mr. BERNARD.—I should say that they are growing less.

The CHAIRMAN.—Do you consider that the general falling off in our requirements is due to increased prices?

Mr. BERNARD.—It is due to increased prices entirely. It is the market outside India that regulates prices.

The CHAIRMAN.—Do you find that the falling off in the demand for bones, is in any way compensated for by the increased demand for superphosphates?

Mr. BERNARD.—There is a larger demand owing to the high prices of bones.

The CHAIRMAN.—Do you think that the supply of bones is increasing or falling off?

Mr. BERNARD.—It fell off last year owing to there being no famine; but for the contrary reason it is increasing this year.

The CHAIRMAN.—Take the general results of the past five years, can you tell us what is the general tendency?

Mr. BERNARD.—I think there must be a tendency to increase, because apart from the influence of good or bad seasons, now that the people are beginning to realise that bones are valuable, they are beginning to take care of them.

The CHAIRMAN.—Now let us turn to oil-cakes. There is an impression in some quarters that the native agriculturist is giving up the cultivation of pure food grains and taking to the cultivation of seeds for export. Do you think that this has resulted in an increased supply of oil-cakes?

Mr. BERNARD.—Not of oil-cake, but of oil-seeds. This is due to the German tariff working against the importation of oil and oil-cake. They want to do their own crushing.

The Resolution was carried, and was confirmed in Open Meeting.

(IN OPEN MEETING).

Hybridisation of Coffee.

Mr. ANSTEND (Scientific Officer) said :—" I do not wish to take up time unnecessarily so, unless any one wishes for it, I do not propose to go through the history of the experimental plot in connection with the hybridisation of coffee. I may, therefore, say that during the year, at the expense of a good deal of labour and in the face of a good deal of opposition, I have at last managed to get the Madras Government to consent to give us a plot of land situated on the Nilgiris, to the extent of five acres, on which we may carry on our experiments. They have also consented to Mr. Butcher, the Curator of the Nilgiri Government Gardens and Parks, supervising and carrying on the experiments in consultation with me. They say, and I must say that I agree with them, that if they give us the land free and also give us the services of Mr. Butcher free, that that is their share towards the scheme and that anything else that it will cost must be our contribution. Those are the best terms that I was able to make with them. Though I asked that the Government should pay the whole cost, they refused in a way that I considered to be absolute. So I come to you to-day once more asking for money. The estimate which I made with Mr. Butcher

will amount to about Rs.400 at the outset, and in future it is not likely to be more. So I am forced to come to you and ask for a grant of Rs. 400. I do not know that I have any suggestions as to how the money should be found. I do not think that it is my place to suggest it; but if we care to carry on the scheme the money must be found. I should like to say that the scheme is not my own. It originated with the Nilgiri Association. I trust the Nilgiri Association will back me up. I would just like to point that both you and I will look foolish, if after the worry we have given Government to get it, we do not utilise it."

Mr. BARBER (Nilgiris).—Mr. Anstead has looked at me as if he was afraid that the Nilgiris will not pay anything.

Mr. ANSTEAD.—Not a bit.

Mr. BARBER, continuing, said, the Nilgiris are quite prepared to do so. We will give Rs.100 a quarter of the total estimated cost. The Nilgiris have given a large subscription to the Scientific Officer Fund, and I think that is all that we ought to be expected to give.

The CHAIRMAN.—Is that a subscription or a donation?

Mr. BARBER.—A donation I think.

Mr. DANVERS.—(N. Mysore) I am instructed by my Association to promise our share. I don't quite know what that means. If a definite amount is required, a certain amount of donations and subscriptions will be received. I presume that a certain sum will be wanted. Whatever you may then call our share we are prepared to pay.

Mr. DICKINS (Shevaroy).—We are quite prepared to pay our share.

Mr. KIRWAN (Bababudins).—We are prepared to pay our share, but it should be on an acreage basis.

Mr. F. M. HAMILTON (S. Mysore).—We are prepared to pay also on an acreage basis.

Mr. P. G. TIPPING (Coorg).—We have already guaranteed our share.

Mr. ABBOTT (Wynaad).—We are prepared to pay our share up to a limit of Rs.50.

Mr. COOK (S. Travancore).—We will subscribe Rs. 50 on condition other Associations do the same.

Mr. BARBER (Nilgiris).—I would like to change the amount I mentioned to a subscription instead of a donation.

The CHAIRMAN.—I think that as things are shaping there will be not the slightest difficulty in raising the money. The scheme is already underwritten to a bigger extent than is necessary, leaving out the Wynaad and South Travancore, who will help us if necessary. Do Wynaad and South Travancore wish to come into the scheme, or is it from a desire to help us?

Both Mr. Abbott and Mr. Cook said that their Associations would join the scheme only with a desire to help if money was wanted.

The following Resolution was then put to the Meeting and was carried unanimously:—

"That on the understanding that the following Associations do guarantee the payment of their share of the cost up to the maximum of the amounts hereinunder written against their

names, the Secretary of the U.P.A.S.I. should be and hereby is empowered to enter into definite negotiations with the Government of Madras for commencing operations on the Nilgiris experimental plot for hybridisation :—

Nilgiri Planters' Association	...	...	Rs. 100
North Mysore	...	...	„ 100
Coorg	...	...	„ 100
South Mysore	...	...	„ 75
Bababudin	...	...	„ 50
Shevaroyas	...	...	„ 50
Total...			<u>Rs. 475</u>

The Resolution was proposed by Mr. E. M. PLAYFAIR (S. Mysore) and seconded by Mr. DANVERS (N. Mysore).

Mr. DANVERS (N. Mysore).—Before closing this subject, I should like to say a word. As North Mysore was the Association that shouted and yelled so loudly for hybridisation, I think I should like to express the thanks of my Association to Mr. Anstead for the prompt way in which he started the scheme. We are all grateful to him and we wish the scheme every success.

Mr. P. G. TIPPING (Coorg).—I would like to thank the Rubber and Tea Associations for coming forward so generously to support the scheme. It does not interest them very greatly (hear, hear).

The CHAIRMAN.—It is very sporting of them.

Quality and Curing of Coffee.

Mr. ANSTEAD said :—“ During the past year I have gone a little into this vexed subject, and paid a visit to the Curing Works at Hunsur and at Coimbatore. As far as the machinery in use is concerned I have little or nothing to suggest. The curers are of the opinion that this machinery cannot be improved, but are quite ready to discuss suggested improvements, which, however, the planters do not submit to them. It is possible that a slight alteration might be made with advantage in the edge runner by perforating the trough holding the coffee so that the pulverised parchment could fall through instead of accumulating as it does at present and being rubbed into the surface of the bean. It is suggested that this is one way in which beans lose colour, and it appears to be those which are not sufficiently dry which suffer most.

“ This leads up to what, in my opinion, is the crux of the whole matter, the drying on the estate. The coffee as sent to the coast is unequally dried, bean for bean. This I proved by taking beans haphazard from a bushel of coffee which was reported dry on the estate drying ground, and which weighed 31 lbs. There was a difference of as much as 14 lbs. in the moisture content between the wettest and the driest bean picked out. The method of sun drying at present usually adopted is not conducive to even drying. Unless the parchment is spread in very thin layers, and constantly turned over, it cannot dry evenly. I suggest that in the old days when labour was more plentiful, and coffee a higher price, more trouble was taken about drying on the estates, and thus a better quality was obtained. The remedy appears to me to be to instal artificial dryers

on the estates. The cost of a suitable dryer to handle two tons of wet parchment at a time is about £230. A large amount of labour will be saved on the drying ground, and all experiments on a small scale with artificially dried coffee point to improved quality and price, so that the cost of the machine would probably be covered in the course of a very few years.

"Other things besides drying affect the quality, however, and one is the presence on many coffee estates of patches, totalling up to a big acreage in the aggregate, of poor trees suffering from old age, borer or stump rot, or a combination of these, which yield a low grade sample of coffee. The crop from these patches should undoubtedly be picked separately, and never mixed with the bulk sample from the estate. I would suggest that it should be sold locally in the cherry. Again, I feel sure that it would pay to grade the cherries before they are pulped, and pulp small and large ones separately, so as to avoid the high percentage of pulper bruised beans that are often to be found in the finished sample. Attention to these points will, I think, improve the quality at least a little, but it is probably better to aim at big yields rather than high quality, and for this purpose work upon hybrids should be pushed on as rapidly as possible.

"There is one more point which is worth careful consideration. It is a common experience among fruit growers in the Tropics that fruit does not set, and that the crop is out of all proportion to the show of blossom. Mr. C. Driberg dealt with this matter in a paper read before a Meeting of the Ceylon Board of Agriculture last April, and made some remarks which are worth carefully thinking about by coffee planters. In the course of his address he said:—'The work of insects in the pollination of flowers is not appreciated in this country. Bees, moths, wasps and ants all assist in carrying pollen from flower to flower. Of all these, the bee is, of course, of the first importance. The position in which nectar is stored is such as to bring the body of the bee seeking it in contact with both stamens and pistil, so that pollen grains sticking to the hairs on the body of the bee are distributed as the bee flits from flower to flower gathering both honey and bee-bread. 'The usefulness and importance of the bee,' says a writer on the subject, 'can hardly be over-estimated; and successful orchard practice will never result until the work of the bee is recognised practically by the establishment of bee colonies in every orchard district.' It is often said that wet weather at the time of flowering is followed by a reduction in the crop owing to rain washing off the pollen. This, according to reliable observers, requires further evidence, and the cause of non-setting is rather to be attributed to the fact that bees and other insects are prevented from paying regular visits to flowers under rainy conditions. There is no reason whatever why everyone who is cultivating fruit-producing crops should not keep a few hives of bees. Bee-keeping, apart from its value in aiding in fertilisation, is one of the pleasantest hobbies, and in indulging in it one can always rely upon securing a supply of pure honey for his table.'

"Darwin's historic work proved that self-fertilisation tends to weaken the resultant offspring; I think that it is more than possible that self-fertilisation may reduce the quality of the coffee bean. That our coffee is largely self-fertilised there can be no doubt, and I understand that the number of bees to be found on the coffee estates

in general has, for one reason and another, been reduced during the last twenty years. I suggest that it is well worth while to try the effect of bee-keeping in connection with coffee. Honey and beeswax fetch fair prices in India, and the industry should, in any case, prove a self-supporting one, and the effect upon the quality of the coffee, should there be any, would soon make itself apparent. We are still ignorant as to what the quality of coffee is due to. During the year an important paper appeared in the *Lancet* dealing with the chemistry of tea and pointing to quality being due to the presence of caffeine and tannin in the right proportions to form a chemical compound, caffeine tannate. This certainly suggests a similar line of research upon coffee, and it is one which I should like to follow up, given time to do so."

The CHAIRMAN.—Before calling on Mr Dickins to move a Resolution I should like to give any experience of my own. I have a certain special collection of hybrid trees and with a view to getting as near as possible to success I had them all covered with mosquito netting at considerable trouble. Further, I got some bees and put them inside. These bees followed the present tendency to go on strike and spent all their time in trying to get out instead of going about their legitimate business. I find now that though these trees have a fair crop it is nothing like as large as the crop on the trees outside. It is quite possible that this is due to the fact that they were covered up and protected from natural influences.

Mr. DICKINS (Shevaroy) said:—

Mr. CHAIRMAN.—In addressing you with reference to the destruction of bees in our District by natives when securing their produce, my Association has instructed me to place the matter before you at this Meeting. Doubtless, the destruction of bees occurs also in other planting districts of South India. All interested in agriculture admit the very important part bees play in a successful setting of blossom. I feel sure our appeal to you on the subject will not be in vain, for in carrying out your various and interesting experiments in hybridisation and so forth you will find the busy little bee one of your most useful and ardent workers. It has been observed on the Sheveroy, and with feelings of alarm—the scarcity of bees when a general coffee blossom prevails—the setting being generally disappointing, though the weather conditions are all that can be desired. When the blossom is out in patches the setting is almost always satisfactory. These instances being so marked, we conclude that by having more bees about the fertilisation of our blossom would be more successful. As matters now stand, millions of our useful helpers are being destroyed every year, and that in a civilised country. So, Sir, with your permission, I beg to move the following Resolution:—

"That Government be asked, through the U. P. A. S. I., to pass some rules prohibiting the destruction of bees in planting districts."

Mr. DANDISON (Nilgiris) seconded the Resolution.

[IN COMMITTEE].

Mr. ABBOTT (Wynaad).—There is a certain trade in beeswax which is likely to be knocked on the head by Mr. Dickins' Resolution.

The CHAIRMAN.—It prohibits the destruction of bees, not the removal of their products.

Mr. P. G. TIPPING (Coorg).—The destruction of bees is due to the destruction of their young.

Mr. DANVERS (N. Mysore).—While it is highly desirable that bees should be preserved in planting Districts, I do not believe from experience in the past and the way that Government looks at these matters, that there is the slightest probability that the Resolution will be given effect to.

Mr. DICKINS (Shevaroy) said they might refer to what occurred this year at Home. The bees were attacked by disease. The large bulk of farmers were bee-keepers and they brought the matter before Government. Kew took it up and sent experts to find out what was the matter with the bees. Surely if the Home Government could do this for agriculture, the Indian Governments might give them some help in the matter. They might at least try and see what help they would get.

Mr. ABBOTT (Wynaad).—I would like you to consider that bees are sometimes dangerous things. I once had a swarm in my bungalow and I was glad to get the Kurumbers in to burn them out.

The CHAIRMAN.—The Resolution seems to me to be one which we should make some attempt to carry through.

The Resolution was carried, and was confirmed in Open Meeting.

[IN COMMITTEE].

The Meeting then began to discuss the other portions of Mr. Anstead's speech.

Mr. DANVERS (N. Mysore).—I don't know anything about the machine Mr. Anstead mentions, but I should like to know whether it dries all the beans equally without injury to any. You said it was impossible to dry equally in the sun even if the beans were spread out finely. I think that with the amount of sun we get it is quite possible to dry evenly.

Mr. ANSTEAD.—The machines dry the beans evenly without injury. Each bean gets the same treatment in the machines. I have had several years experience of machine-drying coffee and cocoa in the West Indies. In the sun you are apt to think that the bean will dry evenly, but under the present conditions they can't do that.

Mr. DANVERS.—I don't agree that you can dry two beans evenly in the sun. If you get A and E beans and a C bean and try and dry them in the sun, by the time the A and E beans are dry the C bean is bleached. In the machine you extract the moisture, no harm is done to the C bean by being overdried, but you will have to go on drying it till the A and E bean are dry.

Mr. F. M. HAMILTON.—You do not attempt any sizing?

Mr. ANSTEAD.—No.

Mr. DANVERS.—With regard to separate picking of diseased patches, it has been tried, but I don't know whether it was done systematically because you have to be limited by the labour at your disposal. But I have gone through the estate nearly every year and stripped heavily certain free-bearing trees. It is no use keeping stuff

with a hope that it will ripen, when it has no intention of ripening. But I have never thought of stripping weakly patches. It seems a very sound idea. In that connection it might pay possibly to isolate such patches at flowering time.

Mr. ANSTEAD.—It would be expensive.

Mr. DANVERS.—I can quite corroborate what Mr. Dickins said about some patches setting well. The reason he gave was that the bees were sufficient for such patches. At the same time I have seen large and small blossoming patches, but whether the bees have been sufficient I don't know. In small patches even when bees are present I believe you get a free setting from gnats and other insects, but in large patches it may be that the supply of bees and gnats may be insufficient.

Mr. F. M. HAMILTON.—It is quite an ordinary thing to strip weakly patches and bad bearing patches.

Mr. ANSTEAD.—It must have a decided effect on quality. I may say for the information of the Meeting that one of the curing firms is putting up a drying machine, so you will have an opportunity of seeing what it will do.

[IN OPEN MEETING].

The subjects of Coffee Markets and Adulteration of Coffee were dropped.

TEA.

(a) MARKETS.

No Resolution was brought forward on this subject, and it was allowed to drop.

(b) CESS.

This subject also was allowed to drop.

(c) GREEN TEA.

Mr. ABBOTT introduced this subject in the following speech :—

Mr. CHAIRMAN.—I have been instructed by my Association to bring forward the subject of a bonus on green tea exported from India, and to ask you to again pass the Resolution that was carried last year, which I will read to you. I want to make an addition to it. This Resolution was, as you know, brought before the Tea Cess Committee at its Meeting in February, 1911. We have to thank Mr. Jackson, of Messrs. Parry & Co., for having done all he could to persuade the Committee to accede to our request. He did all that was possible, but when it came to voting, he was left in a minority of one. Mr. Mead fully explained the reasons that existed then and still exist for renewing the bonus which was stopped in March, 1909—the reasons, that is, from a South India planters' point of view. Hitherto, we have had no chance of going in for green tea. Distance shuts us out of the Calcutta market, and Colombo buyers could not handle the tea in their finishing factories because of the import duty, so any Indian green tea that was exported had to be drawn from Northern India. Attempts were made to finish the green teas on estates, but, I believe, neither in India nor in Ceylon was this much of a success. Indeed, I have been told that a good deal of the tea exported from Ceylon on which the bonus was paid would not pass as green tea at all and had to be sold as black tea.

Finishing green tea is a very technical business, which has to be carried on on a large scale in central factories. And unless wholesale buyers of green tea in the countries where it is consumed are certain of getting continuous supplies of the kind they want, they will not place orders. That is where Mr. Blechynden failed. He could not fill repeat orders for green tea, and lost the market. But now that a factory has been established in South India by a firm that is one of the largest buyers of green tea in Ceylon, and can guarantee the delivery of the kind that is wanted, we have a chance of capturing a share in the American market. And the more green tea that is sold the better for producers of black tea. The bonus is wanted to cover the cost of installing machinery. It will take some time to establish sales; there is a certain amount of risk incurred in going in for green tea, while the black tea market is high; and I think that producers who go in for it ought to be encouraged.

The tea market is high now; and this is the time that we ought to do what we can to keep it high by reducing the output of black tea, so that if the price goes down again, we shall be in a stronger position. The bulk of what South India produces is "common" tea, and six years ago tea we are getting over 8d. per lb. for was selling for 5d. or less. Now these six years of good prices have had their usual effect: the area of tea has been enormously increased. In 1909, South India exported 15½ million lbs., in 1910 it was 18½ millions, and 1910 was a bad year. We shall send away over 20 millions this year. From what I can see, that quantity is likely to be doubled in a few years. If when this new acreage comes into bearing, the market falls to anything like what it was before, we shall be very much worse off than we were in 1904. We are paying more for labour; indeed our difficulties in that connection have become acute; and we shall have an enormously increased production to compete with. I do not want to croak, but I repeat that anything that we can do to keep the market firm ought to be done now. The opposition to the proposal which Mr. Mead put before you last year took rather a curious line, and almost a personal line. Well now, I am not likely to become a maker of green tea. I am speaking in the interests of my own Association, but also I believe in the interests of all black tea-growers. I have the greatest respect for Mr. Barber, who is one of our most successful planters. But in a purely business matter I say we ought to go by what experts in that particular business think, and when I see that a large firm is putting money into green tea, I assume that they have very good reasons for doing so. Well, as you know, our proposal went before the Cess Committee and was flatly refused. I do not think I am putting it too strongly when I say it was laughed at.

Now all tea planters are greatly indebted to the Cess Committee for the excellent work it has done, and it is quite right that the opinion of Northern India, which exports 230 million lbs. of tea against over 20 millions ought to prevail. Still we have been paying our share. The Cess Committee has had the handling of our money for eight or nine years. It will have Rs.25,000 of ours this year, and as I said it will be getting Rs.50,000 from us before long. All we ask is a grant of Rs.12,550.

The Cess income is somewhere about Rs.3 lakhs. We are not asking for charity, we are asking for a small share of our own money to be applied to a purpose that we think would greatly

benefit us. If we are refused again, if our opinion on a subject like this is to be utterly ignored, then I say that when we are asked, as we shall be next year, to vote for the renewal of the Cess we should demand that South India be allowed to manage its own funds. It is no use going into details of a scheme that I hope will never have to be elaborated, for except in this one point we have no quarrel with the Cess Committee. So I will only venture to say one thing, which is that, although planters ought to have a large vote in the management of such a fund as I have suggested, I do not think it ought to be managed by planters.

I will now put the Resolution. We are only asking for a grant for one year, and if it turns out that we are wrong and the Cess Committee right, the grant need not be renewed.

Mr. Abbott proposed the following Resolution:—

"That the U. P. A. S. I. approach the Indian Tea Cess Committee and request that a bonus of 6 pies per lb. on 4 million lbs. of green tea to be exported from Southern India Tea Districts may be granted from the Committee's funds, in order to encourage what it may be reasonably hoped will become a self-supporting and expanding industry in the near future."

The Resolution was seconded by Mr. A. Ff. MARTIN.

Mr. DANDISON (Nilgiris), opposed the Resolution in the following speech:—"I have been instructed by my Association to oppose a Resolution in favour of a bonus on green teas. At the time that the bonus was first given, I think I am right in saying that prices all round were low, 4 to 5 annas per lb. in Calcutta and $5\frac{1}{2}d.$ to $6\frac{1}{2}d.$ per black tea in London, and green tea lower still. Many estates could not profitably produce at this price, and hence it was then to the advantage of the black tea industry to relieve the market of every pound. Now the situation has changed, and the vital necessity for such relief is non-existent, owing to the increased demand for black and in fact all teas.

"The prices of green teas have also risen, and as much as 51 cents per lb. has been realised in Colombo, and I hear forward contracts have been entered into at this rate. Surely at these prices the industry is now self-supporting and does not need a bonus to help it along. Moreover, taking also the probable future of this class of tea in America, where owing to the enforcement of the Pure Food Laws, all "faced" or artificially coloured teas have to be so marked, it would seem that the time is ripe for vigorously advertising and pushing Indian uncoloured green teas side by side with black in America, so as to get a hold of the market now; because up to this China and Japan have dominated the situation with their "faced" or coloured teas, and now as all such teas have to be so marked, we can enter the market on an equal footing; that is to say, if they alter their style of manufacture. If not, then, surely, our pure uncoloured green teas will more than hold their own against others that are labelled "artificially coloured."

I would, therefore, like to propose the following amendment:—"That this Association considers that the present state of the market for all classes of teas does not necessitate the introduction of a bonus on green teas, but is of opinion that it would be advisable to approach the Indian Tea Cess Committee to

allot an equivalent sum of money for the pushing of Indian black and pure uncoloured green teas side by side in America and considers that the time is now ripe for a vigorous advertising campaign."

The amendment was seconded by Mr. E. F. BARBER in the following speech:—"I am directed by the Anamalai Association to vote against a green tea bonus, so I am glad to second Mr. Dandison's amendment. Last year most of the arguments in favour of the bonus were brought up, and you will remember that the argument was that the bonus was necessary in order that a central factory might be started. This factory has now been started, so the argument is disposed of.

"Mr. Dandison has told you that forward contracts have been made at 51 cents, against 43 cents last year. The equivalent of 9½d., and even allowing ½d. for extra cost in making, I fail to see how Mr. Abbott can say that the profit at present prices will be about the same as on black tea. The demands of the Wynaad amount to this, they ask a present of what will amount to at least Rs.20 per acre forward, in order that they may earn an extra 45 per cent. or more per acre on that acreage. Mr. Abbott has disclaimed that he is asking for charity. We have heard during the Meeting the Wynaad will have difficulty in finding 8 annas per acre for Association purposes. May we take it that if this adventitious wealth comes to a large part of the Wynaad they will be able to afford to support the Scientific Officer's scheme? If you think this will be the case, I advise you to support the Resolution if not I cannot see but that on the facts before you, you must vote for the amendment.

The CHAIRMAN put the amendment to the Meeting, and it was lost.

Mr. ABBOTT, before his substantive Resolution was put to the Meeting, said, that he would like to point out that Mr. Barber misunderstood him, or probably he might have expressed himself wrongly. He did not say that there would be no extra profit on making green tea as the market now stood, though he was not aware that it was as high as 51 cents. He did not say that there was no extra profit, but if there was, they deserved compensation for going in for green tea at a time when the market was so high, as they were upsetting all their arrangements. He would also point out that the bonus was asked for the sake of the machinery, as it was necessary. Mr. Mead, who had the matter in hand last year, did not say that the factory would not be put up for making green teas, unless a bonus was granted. Obviously he could not have done so, because he knew that the factory was in course of construction. If they read Mr. Mead's speech they would find that he did not allude to this at all, so it was not correct to say that this was the argument brought forward.

The Resolution was then put and carried, and the Meeting adjourned for the day.

Third Day, Wednesday, August 30th.

The delegates met at 11 a.m.

Pests and Diseases.

FUNGI.

The CHAIRMAN.—I ask Mr. McRae to address the Meeting.

Mr. McRAE read the following paper:—When Mr. Anstead asked me to talk for a few minutes about fungi, I had some difficulty in thinking of a suitable subject. My work, you see, has lain almost exclusively on the plains, where it is the diseases of cholam, sugarcane and palm trees that call for attention, but these are of little interest to planters. So I have decided simply to make a few general remarks, which, I hope, will prove not uninteresting.

A fungus is a plant. As you know, a plant may consist of a single small cell or of several cells. The plants with which we are familiar are made up of a great many cells grouped together in various ways. This can be seen quite well with the aid of a low power microscope. These cells contain the living matter of the plant called protoplasm. Green plants have, in addition, a green colouring matter embedded in their living substance. This colouring matter acts as a sort of screen to absorb the radiant energy of the sun's rays. This enables the protoplasm to take the simple inorganic substances like nitrates and phosphates which the plant has absorbed from the soil through its roots and like oxygen and carbonic acid-gas which it has taken in from the air through its breathing pores, and to manufacture from them complex chemical substances like sugars and starches. Then the plant uses these sugars and starches for its further growth and development.

A fungus also requires these complex chemical substances to enable it to grow and develop. But a fungus has no green colouring matter in its cells like the higher plants. It cannot make its food for itself, from simple inorganic substances in the soil and air. It has to get its food already manufactured. The only things that can manufacture their own food supply from the simple constituents of the soil and air are green plants. The obvious thing for a fungus to do, then, is to use the matter contained in the bodies of green plants after they are dead. The bodies of animals, which are really dependent on green plants for their food supply, is a second possible source of food for fungi. As a matter of fact fungi utilise the bodies of both plants and animals. Those that feed on dead bodies we call saprophytes. They are as a rule beneficial in that they help to dispose of these dead bodies, and in this way act as scavengers; but they may cause some annoyance and loss when, for example, they occur, as moulds, on stored grain or eatables like cheese and fruits. Such fungi, however, it is easy enough to keep in check. But not content with using dead plants and animals as a source of food, some fungi have learned how to invade the tissues of living plants and animals and to extract food from their living cells. Such fungi we call parasites. They are prejudicial.

especially as they attack and kill plants that are of economic value to us. There is an intermediate class of fungi which can attack some living plants, or, if necessary, can live on dead vegetable matter. These may be called possible parasites. Such fungi are among the most difficult to deal with, when they assume the parasite habit and get a good hold of a crop, because when they have killed their host plant, they are able to go on living and to produce further stages of development on the dead bodies of their host.

There is available, at the present time, a considerable amount of information about the diseases of Southern India, chiefly in writings of officers in Ceylon and the Malay Peninsula, much, however, still remains to be done in Southern India on these very diseases. In addition to their life histories, we want to know a great deal more about their seasonal occurrence, of how they are influenced by the various changes of climate and rainfall that occur from place to place and from year to year. Besides these, there are quite a number of diseases of not inconsiderable importance about which we know nothing at all. The field for investigation by a mycologist is a wide and interesting one, and his studies resulting in the discovery of efficient means for reducing the damage done by parasite fungi, will be of much profit to planters.

To the planter and mycologist parasites are perhaps the most interesting of fungi. The planter wants to know how to keep them off the plants he cultivates; the mycologist wants to find how they have solved the various problems presented to them in their adaptation to the parasitic life. Fortunately the two interests harmonise, for, in tracing out the life history of a parasitic fungus one is able to spot the weak point in development, at which it is most susceptible to outside influence, and to direct the attack at the proper time and place. It is here that the labours of a trained mycologist are of value to planters. Investigation of the life-history of parasitic fungi, is a specialised study. They are small organisms and require continued use of the microscope. A well-equipped laboratory is also necessary for the preparation of media and means for the isolation and study of artificial cultures and for the study of the relationship of fungus and host. This work has become more and more important in recent years. A few of the simpler problems fungi have had to solve in assuming the parasitic habit are (1) how to get inside the body of the plant; (2) how to get inside the cells of the plant where the food is made and stored; and (3) how to get their own reproductive parts (or spores) distributed.

Let us take the first problem, namely, how to get inside the body of the plant. You all know that fungi produce spores or germs that are blown on to green plants or that reach them in some other way—as on the bodies of insects that fly from plant to plant or on the implements used in cultivation. Let us start then with a spore. In its simpler form it is a single cell. It may, however, consist of 2, 3, 4, 10 or more cells united together. It may be a thin walled spore that requires a longer or shorter period of rest before it begins to grow. The diversity of form and adaptation of spores is great and is an interesting subject, to which we must not, however, digress. A spore gets on to the outside of a plant. In suitable conditions of warmth and moisture it germinates, *i.e.*, from a part of its surface it sends forth a thin tube called a germ-tube and at this tube the protoplasm, or living substance, passes. The tube grows on the outside of the

plant and gets inside the body of the plant either through the breathing pores, which are natural openings, or it bores through the outer covering of the plant by producing a ferment at its tip which dissolves the cell walls. Now it is inside the plant's body, and it has still to decide how it is going to get inside the cells in order to get at the food material of the host plant. Some fungi go straight ahead in a business-like way. At the tips of their fine tubes they produce a ferment which dissolves the cell-walls and allow the tubes to enter the cells and get at the food material. They may bore their way out in the same way as they got in, and then bore into the adjacent cells. Other fungi are more delicate in their method. The tubes once inside the body of the plant grow and branch in the spaces between the cells where there is plenty of air. From the parts of the surface of their branches a ferment is secreted which dissolves the cell-wall, and the fine tubes grow into the cell and act as suckers to absorb the food inside the cell of the host plant. Other fungi, again, simply place their tubes in close contact with the cells of their host plants and absorb food through the cell-wall, without actually penetrating the cells. One group of fungi, the mildews, have decided not to go inside the body of the host plant at all. They remain on the surface and simply send suckers into the cells below. Now that the fungus has access to a plentiful supply of food it develops rapidly, and its presence usually causes some modification in growth or minute structure of the host plant. Such changes are most diverse, varying from minute modifications of a single cell or of a small group of cells to those changes which give rise to relatively large deformities, such as clubroot of cabbage, pocket plums and cankers.

As a rule, the fungi with which we are familiar in our economic plants gradually ramify through the cells of the whole plant. Not only is there a drain of food material from the host plant, but the fungus actively kills the cells into which it grows or into which it sends suckers, and ultimately causes the death of its host. Hence a fungus has to make provision for the continuance of the species after the death of its host plant. This it does by producing spores. It would obviously be an advantage to produce the spores on the outside of the plant, for they could then be more readily distributed to other plants than to produce them within the plant, for then they would have to wait till the plant decayed and disintegrated before they could be released. Fungi have discovered this, and as a rule they do produce the spores on the surfaces of their host plants. This is the stage when the fungus usually first becomes visible to the casual observer. This is not, however, the first stage. The fungus has been inside the plant for days, weeks or even months, doing its work in a silent way. It has been destroying and feeding on the tissues of the plant. Picking of the fruit bodies of a fungus will not destroy it. People have often asked me why it is that when they pick off fungus fruit-bodies, whenever they appear the plant attacked never seems to get any better. They do not realise that fruit production is a late stage in the life of a fungus and that the host plant is full of the fungus even though it is not easily seen. Fruit-bodies of fungi vary. Some fungi send out single threads or little groups of threads to the surface and they either pass out through the breathing pores or they bore out. Then they produce spores at their ends. Usually, however, some provision is made for the protection of spores while they are developing by many threads growing together to form some sort of a fruit-body. Fruit-bodies are of the most varied description. You

are all familiar with the mushroom, which is the fruit of a fungus which grows underground on decaying leaves, twigs and roots; and with a bracket fungus such as *Fomes* on rubber, which is the fruit of a fungus which lives inside the tree gradually destroying and absorbing the tree's tissues till it has gained strength and vigour enough to produce fruits. Fruit-bodies of fungi are diversified to the most wonderful extent, and it is by this feature together with the form of the spore that the individual species of fungi are recognised. The number of spores produced by an individual is usually great. It has been calculated that a single mushroom discharged 1,800,000,000 spores in two days or about 40,000,000 per hour, and that a single parasitic bracket fungus, a specie of *Fomes* produced about 11,000,000,000 spores, and this was only one of a group of about ten on the same tree. Such numbers are inconceivably large. Since it may be assumed that the number of fruit-bodies of any given species remains fairly constant from year to year, except in times of epidemics, these give us an idea of how many of the spores die and how few, in nature, ever find a suitable place for successful development.

[IN COMMITTEE].

Mr. ANSTEAD said that the chief and most important of the pests with which they had to deal on the crops in which they were interested were undoubtedly fungi, or due to fungi. Green bug was perhaps the worst of all, but most of the other pests were fungi. In coffee they had stump rot working at the roots, and on the leaves there was black rot, both caused by a fungus. Turning to tea, nearly all the diseases were fungi, there they also had stump rot and the numberless leaf diseases, all due to fungi. Turning to rubber, they met with stump rot again and pink disease, also due to fungus, so that as a planting community they were particularly interested in Mr. McRae's work and wanted to know how to kill and how to prevent these diseases. It was not altogether a simple matter. They had to begin at the beginning and discover the life history of the fungus before they could discover the best method of killing it and for the ordinary individual it was very difficult to get a grasp of what exactly a fungus was or what it looked like to begin with and how it worked. They could not see it with the naked eye, for often it was so very small that it had to be magnified many thousand times before they could get an idea of what it looked like. It was just as difficult for a man to imagine what a great cathedral was like if he stood a few inches away from it. He could only see small sections of it which would have to be put together to form an image in his mind. Consequently it was difficult for the mycologist to explain in simple language what a fungus was, what it looked like, and what it did. Their late Chairman, in the interview that had been referred to on the previous day, did him (Mr. Anstead) the honour to say that he was an expert mycologist. Unfortunately, he was not, and he found some difficulty in getting a real grasp of what a fungus did. So it was a great advantage to him as it was to the others to have an expert mycologist present to take part in their discussions. They ought therefore to make the most of the opportunity and get Mr. McRae to come down to their level and by a series of questions pick his brains and try to get into their heads some of the points they would like to understand. By way of starting the discussion he would like Mr. McRae to outline a few points in regard to a disease which had not yet got at their tea, but which was likely to if they did not take the necessary precautions. Mr. McRae had investigated blister

blight in Northern India and probably knew more about it than any one else. As he had said, they had not got it in South India; but they were interested in knowing what it looked like. Mr. McRae might be able to tell them how they were to go to work to avoid getting it. They imported tea seed from Northern India, and they had been advised to treat it with formalin, to kill the spores of the fungus and to keep it out.

Mr. McRAE said that he had an opportunity last year of seeing the blister blight in Darjeeling. Unfortunately he was not called up until a year-and-a-half after the blight had been introduced into Darjeeling. That was one disadvantage a mycologist always laboured under. People did not get him to investigate soon enough. If they had got him before, it was probable that he would have been able to discover how it got into Darjeeling. Half the difficulty was to know how it got into the District. He was perfectly convinced that he knew how it got in; he was certain it was introduced from outside, but there was not enough proof to bring it home that it came either from North-east Assam or from the jungles round Darjeeling. For about a fortnight he hunted all the jungles, but he did not get a particle of anything like blister, and he could not get any one to confess that he saw blister blight shortly after using imported seed. He saw some badly blighted tea in a block in which some new plantations had been opened and he was quite convinced that it was introduced from North-east Assam in the tea seed or packages of earth in which the seed came. He could not prove it, however, and there was no one brave enough to say that he introduced it. He would certainly advise all planters getting seed from Northern India to disinfect it, by destroying the packages of earth in which the seed comes and to disinfect the seed by steeping it in formalin or corrosive sublimate for an hour. These two would be found quite sufficient. It was quite easy to kill the spores of blister blight: even a very weak solution of salt was sufficient. It did not matter what disinfectant they used, as long as it was done thoroughly. He would certainly advise no planter to get tea seed from Northern parts round Dibrugarh and Darjeeling—he knew that the best tea seed did come from Dibrugarh—if he was unwilling to run the slight risk of introducing the disease.

Mr. COOK (South Travancore).—Might I ask, when blister blight appears is a weak solution of salt sprayed on the young plants all that is necessary to make it disappear?

Mr. McRAE.—The experiment was tried, but a weak solution of salt was not always successful. I would advise Bordeaux Mixture as an excellent means of killing the spores of blister and when it gets on to the trees. One planter found that kerosine was quite efficient, but it is difficult to get it on to the trees. He started spraying with pure water and then with kerosine oil. The time to put Bordeaux Mixture on is in the early part of the year; it is not a bit of good to apply it in the rains. The time to apply it is before the blister blight breaks out. I am not well enough aware of the climatic conditions in your district, so I cannot tell you exactly when to apply it, but in Darjeeling it was in the early part of the year.

Mr. DOWNING.—Would you kindly explain the appearance of blister bug in tea?

Mr. McRAE.—I wish I had known that this question was coming up, I have some diagrams which would show you exactly. It is exactly like what it is called like a blister on the leaf. The part of the leaf affected is outside the plant of the leaf; there is a big hump on one side and hollow on the other.

Mr. DANVERS (North Mysore).—I think that we have something similar on our jungle trees.

Mr. McRAE.—We get blister blight on jungle trees, caused by fungus, but it is evidently a different species.

Mr. DANVERS (North Mysore).—I am too ignorant on these matters to attempt to pick Mr. McRae's brains, being in the position of the child that asked its mother why it had a pain under its pinafore. But, at the risk of being a bore, I should like to call attention to the note of warning Mr. McRae sounded about calling in scientific aid too late. I should like to impress it again on my brother delegates.

Mr. DOWNING.—Does the blight take the old leaves on the flush only, or both?

Mr. McRAE.—Chiefly the young leaves. I have only found the spores germinate on leaves not over a month old. I have tried sowing spores on leaves older than that, but I never got a single germination. It does not prove, of course, that old leaves will not become blistered. I have not seen it attack any part of the tree except leaves and the young green stems. On the stems the cortex becomes swollen. In Darjeeling, of course, the disease is in its infancy.

Mr. DOWNING.—How do climatic influences affect the disease? Is damp beneficial or prejudicial?

Mr. McRAE.—Damp is always beneficial to these pests. It was very noticeable that when we had a muggy day we could see a whole bush become affected, showing that rain and warm moist weather is the very thing this fungus wants.

Mr. DICKINS (Shevaroys).—Has this blight its own enemies?

Mr. McRAE.—I don't know. I found a little beetle that was said to eat the spores and threads of the blister, but I don't believe that the beetle could make any difference in the amount of blight on the crop.

Mr. ABBOTT.—It does not attack the flush?

Mr. McRAE.—Yes, that is just what it attacks. An experiment was made with a lot of flush leaf that was attacked by blister. It was made into tea, but the blister did not seem to make any difference in the flavour.

Mr. DANVERS.—What are the remedial measures; the direct application of chemicals or a general improvement in cultivation?

Mr. McRAE.—Dr. Mann is the only one who has had this blight a long time. He recommends careful pruning and warns the planters to stop heavy pruning, as the blight comes badly on heavily pruned tea.

Mr. DICKINS (Shevaroys).—At what elevation is the blight at its worst?

Mr. McRAE.—From about 3,000 to 5,000 feet. I know, however, that it gets right away down to the plains into the Dooars. It does not do much damage in Darjeeling. One planter made a careful estimate and said that it came to about 30 maunds of dried tea; but another put it down at 100 maunds; but his estate was very bad. It does not do the same dreadful damage as mosquito blight, but it does do damage.

Mr. PLOWDEN.—Does the remark about the time to apply Bordeaux mixture apply also to rubber?

Mr. ANSTEAD.—That is for me to answer. Bordeaux mixture is best applied in the early part of the year before the monsoon. You have no rain in January, February or March. That is the time to apply it. March, I should say, is the latest.

Mr. DANVERS.—We have a fungus in coffee. Black rot comes in still, damp weather. I don't find it so prevalent in parts which get the wind, but in damp hollows it is very bad and destroys the crop. I believe that Dr. Coleman knows of something which, if painted over the leaves, prevents attacks of black rot; but to adopt such remedies costs more than the loss of the crop—the remedy is worse than the disease.

Mr. ANSTEAD.—If the gentlemen on the other side of the room are trying to persuade themselves that the conditions in our tea districts are not suitable to blister blight, I can assure them that they are wrong. From what I know of the conditions I should say that they are eminently suitable for blister blight.

Mr. McRAE.—If ever it does come. I shall be glad to be consulted. I don't want it to come, but if it does I shall be glad to take up the work again.

Mr. ABBOTT.—So far you don't think that it is likely to come, except with imported seed?

Mr. McRAE.—That is the most likely source of infection.

Mr. KRUMBIEGEL.—With reference to fungus in general, the proper time to be careful is the dry weather before the plants are attacked. That is the proper time to keep the trees free from as much rubbish as possible and keep them disinfected with time. Immediately it becomes warm and moist the spores begin to grow. It is only then that you become aware of them, but they have been in your plants all through the dry weather. That is the time to take steps to prevent the spread of the fungus.

Mr. BALL (Coorg).—Could you kindly tell us something about Pepper disease?

Mr. McRAE.—I don't know much about it. I went to the Wynaad and saw some of the root disease; but I could not take the investigation up unless I had a proper equipment and laboratory. I have not got that, but when I do, I should like to deal with it. The disease does occur on the low lying parts near Calicut, but it does not occur at Taliparamba. I don't want to commence experiments there, in case I might not be able to control them. I should prefer to carry out experiments where the disease occurs.

Mr. DICKINS (Shevaroy).—Turning to the blister blight, I suppose clothing is likely to spread the disease.

Mr. McRAE.—Yes, but the only precaution that was taken, was that coolies put on to pick off the blister were made to wash their hands.

Mr. DANVERS.—With reference to what Mr Krumbiegel said about the spores always being with us, I would like to ask your opinion about mulching—whether in your opinion mulching would have a bad effect on increasing fungi. It would, I think, provide a bed for them.

Mr. McRAE.—Now you have got me on to a subject which I don't know. If mulching makes the plant healthier, anything that makes for the health of a plant militates against fungi.

Mr. DANVERS.—It would also provide a cultivating bed.

Mr. McRAE.—It would certainly provide a cultivating bed if it contained dead organic matter.

Mr. DANVERS.—In your opinion anything that tends to the general health of the tree would be desirable to use against disease, fungoid or otherwise.

Mr. McRAE.—Yes, I think it would.

Mr. KRUMBIEGEL at this stage made another statement, most of which was inaudible at the Reporter's table, regarding the desirability of keeping the estate clean and mulching on certain methods.

Mr. DANVERS.—All this again reduces itself to a question of *L. s. d.* In certain seasons you might get such a bad attack of disease that you would have to spend a vast amount of money. That would be practically useless.

Mr. McRAE.—That is where you must bring in the trained man to consult. If the preventive measures are more expensive than the return an absence of fungus would give, they are not worth trying; you must get a mycologist to find out whether it would be better to spend the money on the disease or to let it be. If the disease was of a kind to cause a vast amount of damage in a few years, it might be useful and profitable to spend the money.

Mr. DANVERS.—On the other hand the question always arises whether the disease will be as bad as the expenses you must incur.

Mr. McRAE.—It is difficult to estimate the amount of damage that fungus will do. If fungus took hold of rubber trees and they died out one after another, you could not definitely assume that it would cost less to let them go than to try preventive measures. It is always difficult for the planter to determine this.

Mr. DANDISON.—Could you tell us anything about thread blight?

Mr. McRAE.—I have only seen thread blight bad on one garden, and there it was only a comparatively small patch. It was kept in check by the coolies, who went round and scrubbed all the tea stems. This was done in the cold season when there was little else doing, and it checked the thread blight on this particular place.

The CHAIRMAN.—I am afraid that this discussion is getting rather confusing, but can you tell me whether so far you have any knowledge as to where these fungoid diseases start? Do they start on the leaves or do they come up the stem from the ground? Mr. McRae's last remark has prompted this question.

Mr. ANSTEAD said that he could answer that question. The spores started neither on the ground nor on the leaves; but they started on the stems. As a matter of fact when the monsoon broke the spores began to grow and they started at the nodes. As he had advised them last year, the line of experiment to adopt was to scrape and paint the stems in dry weather. He believed that only one man had taken the suggestion up. Under the new conditions this was a matter that he would see that the Assistant got to work on at once.

Mr. F. M. HAMILTON said that the only experiment just referred to by Mr. Anstead was carried out in South Mysore. He had asked the gentleman carrying out the experiment what had been the result. He said that he had started as instructed by Mr. Anstead to paint the stem and had not touched the leaves; as far as he could see, there was very little black rot, because the monsoon was late. He could give no reliable information till September. Some of the trees painted were attacked just as badly as some that had not been painted.

The CHAIRMAN.—Do you know when he painted the trees?

Mr. F. M. HAMILTON.—Some time in the hot weather.

Mr. DANVERS.—In this connection I should like to say that I don't think that any one of our experiments has been conclusive at all. I notice this year black rot on places that have never had black rot; a slight change in the direction of the wind seems enough to start it in a fresh place.

Mr. ANSTEAD.—I must only give you Dr. Lehmann's answer that you quoted—Experiment, experiment, experiment. You must get results in time.

Mr. COOK (S. Travancore).—I should like to ask Mr. Anstead a question. He said that all diseases in tea started from fungi.

Mr. ANSTEAD.—I said "most," not "all." Of course there are insect diseases, but if you add up the damage done, you will find that most is done by fungi.

Mr. PILKINGTON.—Have you ever seen black rot on the lower part of the stem? Personally I never have. I have seen it on the upper parts where the primaries come from. I have seen it on the leaves and on the branches, but never on the stems.

Mr. ANSTEAD.—I have found it on the lower part of the primaries and where the primaries join the main stem. So I presume that you can find it on the main stem. Undoubtedly it starts on the primaries and the upper part of the main stem.

Mr. PILKINGTON.—Does it not point to the fact that we should work from the top, downwards?

Mr. ANSTEAD.—Yes, but if you tell the cooly to paint half the stem or a quarter, by the time he has understood it all you are going to lose a lot of time.

Mr. DANVERS said that he had seen black rot at the end of the primaries of a small plant about 2 feet high, and the two outermost leaves were affected, which seemed to point to the fact that the spores were blown on from something outside.

The CHAIRMAN.—I suppose spores can get on to a plant in the nursery.

Mr. DANVERS.—I have never seen it in any nursery of mine.

Mr. KIRWAN.—I have seen it in several nurseries. A nursery I have has black rot by the end of July. It is an isolated nursery and not near an affected patch.

Mr. BARBER.—We have fungi that attack green bug, would it be possible to effect a culture of fungi that would check bug?

Mr. McRAE.—It would be perfectly possible to prepare a culture; whether it could be done on a commercial scale is another matter. It might not be expensive, but you would have to get an expensive man to do it.

Mr. ANSTEAD.—The chief difficulty about that is that the fungus won't grow in dry weather. Unfortunately, it is in the dry weather that green bug does the most damage. If you could get a culture of fungus that would grow in dry weather, you would get the top hand of green bug. I have not given up the idea; but if you can't spray with kerosine you can't spray with fungus.

Mr. CHAIRMAN.—How long does it take for the fungus to become active? If you spray on the culture, how long would it take to commence work? I am referring to Mr. Barber's question. Suppose the culture was sprayed on during a shower, would it get to work at once?

Mr. McRAE.—I have not worked with fungus, but I think that it would. Mr. Anstead said that they were using fungus in the West Indies, making a spray of it, and had great success. But there they had tropical conditions, rain every day in the year and a hot steamy moist atmosphere in which the fungus grew.

Mr. DANVERS said that if he were to sum up the discussion it would amount to this: From what Mr. McRae had said the main point was that they must have a mycologist, and from what Mr. Krumbiegel had said they must do, both have a mycologist to perfect their theoretical education and plenty of labour. The problem that the planter had to solve was this question of labour. The planter was blamed for not doing certain things simply because he could not. This discussion was interesting, but they had a paucity of labour. Many experiments, he might say, were started, but had to be given up for what was at a particular time more important work.

The CHAIRMAN.—I think you will all be in agreement with me when I say that we are grateful to Mr. McRae for his most interesting paper and the information he has given us. These discussions are always most interesting. It may be that in the present incomplete state of our Scientific Department, we are not always ready to go straight away and commence work, based on the information

we receive ; but they give us a good basis for further thought and, year by year, we must collect information which will enable us to put further questions when we get an opportunity. Mr. McRae, I am sure we are all most grateful to you for the trouble that you have taken in coming here and giving us your help.

I hope we may be able to rely on you on a future occasion, when we may be better prepared to put our problems before you.

Mr. McRAE thanked the Chairman for his very kind remarks.

Fertilisers.

Mr. ANSTEAD, the Scientific Officer, read the following paper on the use of Natural Manures on estates :—

The annually increasing price of bones and poonac, two of the commonest sources of manure used on estates in Southern India, make it imperative that attention should be turned to substitutes for them. It is for this reason I am anxious to work out a method of extracting the oil from Hevea seeds in this country, instead of exporting the seeds to Europe to be crushed, so as to retain the residual poonac as a fertiliser. Poonac is said to be suitable for a cattle food, but this aspect of the question does not interest us so much as the fertilising value.

It is especially necessary with a crop like coffee to find substitutes for high-priced manures, since the margin of profits limits the amount which can be expended upon fertilisers.

When I first assumed my duties here two years ago, *viz.*, in May 1909, the price quoted by one well known firm for raw bone meal was Rs.65 per ton, it is quoted in the current price list of the same firm at Rs.80 per ton. The increase in the price of poonacs is shown in the following table :—

		May 1909.	1911-1912
		per ton.	per ton.
White Castor Poonac	...	Rs. 70	Rs. 75
Black Castor Poonac	...	" 50	" 60
Neem Poonac	...	" 53	" 60
Hoongay Poonac	...	" 45	" 48

Now every estate supplies a certain amount of what may be described as "natural manure," which when fertilisers can be purchased cheap it is perhaps not worthwhile to pay much attention to, but when fertilisers reach a high price these natural resources are well worth looking after.

Coffee is specially fortunate in this respect, since there is a waste product, the pulp, which is capable of being converted into a valuable manure. Fresh coffee pulp contains about 20 per cent. of organic matter, 0.4 of nitrogen, 1 per cent. of potash, and 1 per cent. of phosphoric acid.

"If this is properly conserved and made into a compost in a water-tight covered pit, with line and yard sweepings, such manure as is obtained from the cattle working on the estate or visiting it in the transport carts, and the manure obtained from the stables, it will produce a considerable bulk of valuable manure each year. In

several places I have got such composts being made, and hope during the course of the coming year to publish analyses of these, and to show exactly what can be done, and how these compost compare with bones and poonac, both in manurial value and price.

But there are other natural resources besides this obvious one of coffee pulp. Most estates possess a certain amount of waste land, along road sides, round the lines, and so on. These lands are often an untidy mass of lantana and other coarse weeds, but they might be made a profitable reserve of manure. Leguminous plants, such as Bengal bean, and big Crotalarias, should be established on them and the material cut from time to time and added to the compost heap, or used as mulch.

Green dressings grown in young clearings are capable of supplying more manure than is sometimes realised, and in order to give you some idea of this amount I beg to call your attention to the analyses of two common "weeds," suitable for green dressings, which I have recently made in my laboratory. Specimens of the plants are on the table before you. Both plants are being experimented with, and the samples were taken from actual experimental plots.

In the case of *Indigofera tinctoria* a patch was grown by itself in a nursery, in order to obtain seed in quantity. The amount of material on a square yard was found to be 7lbs. 9 ozs. at the time of flowering. This is equivalent to about 16 tons per acre. When sun-dried, the weight was reduced to 1 lb. 9 ozs. or $3\frac{1}{2}$ tons per acre.

The *Tephrosia tinctoria* was grown among young tea in the Wynaad, an account of the experiment being published in the *Planters' Chronicle* (Vol. V., p. 487). The amount of fresh material cut from an area of six square feet weighed 28 lbs. 6 ozs. equivalent to about 15 tons per acre. This when sun-dried was reduced to 14 lbs. 2 ozs., or about $7\frac{1}{2}$ tons per acre.

Analyses of these two plants show that they contain the following amounts of plant food, which has also been calculated to pounds per acre, on the basis of the yields quoted above.

INDIGOFERA TINCTORIA.

—	Leaves.	Stems and Pods.	Whole Plant.	Lbs. per acre.
	24 $\frac{0}{10}$	76 $\frac{0}{10}$	...	...
Moisture ...	7.69	7.71	7.70	...
Organic matter ...	81.91	87.24	87.60	tons. 3.07
Ash ...	10.40	4.55	4.64	...
	100.00	100.00	100.00	...
Containing Nitrogen ...	2.66	0.84	1.28	lbs. 100.3
" Silica $\frac{0}{10}$ ...	...	...	7.72	...
Phosphoric Acid $\frac{0}{10}$ ...	...	...	6.86	24.9
Potash $\frac{0}{10}$ ...	...	...	13.41	48.8
Lime $\frac{0}{10}$ ...	...	...	24.26	88.25

TEPHROSIA TINCTORIA.

---	Leave.	Stems and Pods.	Whole Plant.	Lbs. per acre.
	41.8 ⁰ / ₁₀	58.2 ⁰ / ₁₀	...	...
Moisture ...	6.32	6.29	6.30	...
Organic matter ...	88.78	91.12	90.14	tons. 6.7
Ash ...	4.90	2.59	3.56	...
	100.00	100.00	100.00	...
				lbs.
Containing Nitrogen ...	2.66	0.77	1.56	262
„ Silica ...	14.28	10.04	12.48	..
Phosphoric Acid ...	7.88	7.61	7.76	46.4
Potash ...	16.93	15.82	16.45	219.4
Lime ...	19.26	21.88	20.37	265.5

This amount of plant food would be supplied by:—

	RS.	A.	P.
1,671.6 lbs. of White Castor Poonac, costing ...	57	7	9
41 lbs. of Basic Slag, costing ...	1	4	6
63.4 lbs. of Sulphate of Potash, costing ...	5	10	6
A total of Rs.64.5 in the case of <i>Indigofera tinctoria</i> , and			
4,366.6 lbs. of White Castor Poonac, costing ...	150	0	0
13.5 lbs. of Basic Slag, costing ...	0	6	9
351.5 lbs. of Sulphate of Potash, costing ...	31	6	0

A total of Rs.181-12-9 in the case of *Tephrosia tinctoria*.

It will be observed that in quoting the cost of the equivalents of poonac and other fertilisers, no account has been taken of the cost of transport of these, a very considerable item on some estates, and one of the advantages of such natural manures is that they are produced on the estate, and cost little or nothing for transport.

It may be contended that the plant food supplied by the green dressings has been obtained from the soil and is simply put back again. But this is not altogether correct. The nitrogen is largely obtained from the air, through the medium of the bacteria in the nodules upon the roots of this class of plants, a process with which I take it everyone is familiar. The phosphoric acid, potash and lime are certainly obtained from the soil, but these plants are very deep-rooted and much of these materials is wrested from the lower depths, where the roots of the crops are not feeding, and they are put into the upper layers, where the crop can obtain them, and, moreover, they are put back in a readily available form, when the green dressings rot down. This is especially the case with the lime.

Suppose, however, we leave out of account these mineral plant foods and value the green dressing upon its nitrogen content only, which is an undoubted gain to the soil; the *Indigofera* grown on an acre is then worth Rs.57, and the *Tephrosia* Rs.150.

This, then, is the case for what my clean weeding friends will consider as the "prisoner." I contend, gentlemen, that it is a good case, and that the green dressing is not only "not guilty," but that in these times of high prices for fertilisers we cannot afford to neglect the benefits it holds out to us.

[IN COMMITTEE].

A long and interesting discussion took place in Committee.

Mr. F. M. HAMILTON (S. Mysore) asked Mr. Anstead for further information about the different systems of keeping these composts. They kept it in ordinary open pits, not water-tight pits. Had Mr. Anstead any experience of what they lost by keeping the manure in open pits and not water-tight pits?

Mr. ANSTEAD said that if they kept the pit without cover they lost roughly about 65 per cent. of the value. If they had cover they reduced the loss to about 40 per cent. If they watered it they reduced the value by about 40 per cent. It was quite easy to make a pit such as he had suggested. In fact it would pay them to make a cemented tank. An ordinary pit dug in the hill side, with the bottom tamped down with clay, filled with stuff and covered with a pandal did pretty well. The planter lost enormously when he put in the ordinary cattle manure that he bought in the villages; it did not pay the cost of the coolies who brought it.

Mr. DANVERS.—We imagine that the best way to make cattle manure is to have deep pits in which the cattle are kept and every day put a layer of earth over the surface, and that absorbs all the nitrogen. You need never move the cattle, they press the stuff down and it does not get decomposed.

Mr. ANSTEAD.—You get another complication set in: the cattle get disease in the feet and it is a serious disease.

Mr. DANVERS.—I have never cleaned my cattle shed for 25 years, and have only had disease three times, and that was brought in from outside. If you put down fresh bedding and fresh earth I don't believe that it has any effect on the cattle's feet. Your cattleman may say so, but you will find that they have taken your cattle among infected cattle.

Mr. TIPPING.—My experience is similar, except that we have to water the manure to keep it from getting hot.

Mr. ANSTEAD.—I approve of the method, if you don't have cattle disease. That is a difficulty that is thrown at my head when I suggest it.

Mr. ANSTEAD asked Mr. Playfair for his opinion of an experiment he made with green dressing as a manure.

Mr. PLAYFAIR said that he only experimented with it in a small way, and as far as it had gone it was satisfactory. The plant was found by Mr. Anstead on his drying ground and he noticed that it was growing all over the District. He got some seed and planted it in a small plot in the nursery and the seed he then got he planted in a patch of young coffee. Unfortunately the amount of seed was so small that the experiment was not entirely satisfactory, because the

seed had to be sown thickly, a great deal of it did not germinate. However, he had sown another plot and would carry on the experiment during the monsoon.

The CHAIRMAN.—Mr. Playfair has told us that this seed does not germinate. I find that a good many of these legumes are very common weeds. If you will examine several of the *Crotalaria*, you will find that 50 per cent. of our weeds are legumes. I collected a good deal of seed and put in some this year and some last. I think I found the first results were disappointing, but if you will have patience you will find a lot coming up next year. Many have told me that the seed does not germinate, but I hope that those that try the experiment will not lose patience.

Mr. DANVERS.—That is the very point I was going to speak about. Last year I got seed from the Nilgiris and put it down, but it came up in a most unsatisfactory manner. I thought that it must have been too late for the seed to germinate. This year I find the legumes coming up in all sorts of places in which I have never seen them before.

Mr. P. G. TIPPING.—I think a great deal is due to having your attention drawn to it. Mr. Anstead has pointed out a lot of legumes that men were prepared to stake their lives did not grow on their estates. But we were considerably surprised to find them all over the place afterwards. I am hanged if one that we thought never existed was not found growing in the middle of a footpath.

Mr. PLOWDEN said that the proper way to sow *Crotalaria* seed was to steep it in hot water. They would find that it would germinate in a much shorter time than usual.

Mr. ANSTEAD said that those interested in the legumes would find a number of them in the Herbarium collection on view at the Exhibition. He had been able to add to the collection that he had shown last year. Mr. Krumbiegel had been kind enough to send a collection of pot plants which had all been named and which would also be found in the Exhibition. He would like to take this opportunity of expressing his thanks to Mr. Krumbiegel for the trouble he had taken in raising these plants from the seed that he had sent to him from time to time.

Mr. CHAIRMAN.—I should like to ask Mr. Krumbiegel if he has found any difficulty in germinating these seeds.

Mr. KRUMBIEGEL said that there was no difficulty in germinating these legumes. All legumes were slow germinators. The safest way was to steep them in hot water, but they would get the same result by steeping them in cold water for a longer time. They could stand an enormous amount of heat. Some of the legume seeds lay in the ground in the hottest weather; but directly the monsoon came they germinated at once.

Mr. DANVERS said that he wanted to ask Mr. Anstead a question about fresh cattle manure. Sometimes one wanted to put in cattle manure in a hurry, but the bedding having become mixed with it did not seem that this could be done properly. He had heard that the proper thing to do was to mix lime with it to hurry up decomposition. The question was, would that not destroy the nitrogen in it.

Mr. ANSTEAD said that lime was the wrong thing to use, gypsum was the proper thing, but it was difficult to get. The proper way to apply cattle manure fresh was with the plough behind. If it was mixed with bedding, the proper way was to bury it, but that would be difficult to do.

Mr. DANVERS.—The cattle manure is all right. I was thinking of the bedding.

Mr. ANSTEAD.—The proper thing to do is to turn it in.

Mr. DANVERS.—But it is very difficult to turn in.

Mr. ANSTEAD asked Mr. Langley if it was possible to get gypsum easily.

Mr. LANGLEY said that he did not think so.

Mr. KIRWAN.—Would it be any use pulping the local limestone finely and using it as a manure?

Mr. ANSTEAD.—No, very little. They wanted lime, not as a manure but as a medicine. Indian soils were acid and contained very little lime. They were always putting in bulk manure and heavily mulching the roots, and in time the soil got sour. Directly this happened the beneficial bacteria ceased to grow, the soil got sick and the trees went out of yield. What they wanted to do was to neutralise this acidity, and they must therefore use unslaked lime and not limestone. The lime they had to apply was not a fertiliser, but a sort of medicine to make the fertilisers in the following year available.

Mr. KIRWAN.—I think that annually for the last 10 years I have applied lime. It has not been dug in, yet it seems to have done some good.

Mr. ANSTEAD.—How much better would it have been if you put it in on the proper way. You see that it has done good in spite of your bad method.

Mr. KIRWAN.—You mention lime as a disinfectant. Does lime applied to the soil act as a disinfectant in the case of root rot.

Mr. ANSTEAD.—I can't answer at present. I have an experiment going on. I am inclined to think that it does a little good. The Chairman said that he had two years ago applied a heavy dressing of lime to a patch where the deeply rooted shade trees were heavily affected but curiously enough the surface feeding trees seemed absolutely immune; but the coffee was going out; but since the application of the lime the supplies had come on and the older coffee surrounding it, though rather weak, was certainly not dying out to any extent.

Mr. DICKINS.—What do you call a heavy dressing of lime.

The CHAIRMAN.—About 500 lbs. per acre.

Mr. DANVERS.—Was the coffee worth the expenditure? Last year I asked whether I could not dig and fork with a view to opening the soil and aerating and sweetening it. You (Mr. Anstead) said that you did not approve of digging and forking and advised me to apply lime. You told me that two tons per acre was the proper quantity to put in. I can quite understand that if I put two tons of lime, I would get better results than by forking and digging. I

find that I can do any forking for Rs.3-8 per acre, whereas two tons of lime would cost about Rs.50. This therefore is a question of *L. S. D.* and simple arithmetic. Do you get Rs.46-8 worth of good by liming or Rs. 46-8 worth of harm by forking? You see it is a large sum.

Mr. ANSTEAD.—It is one of those questions that is extremely difficult for me to answer. Really I am rather inclined to give you the answer that it is for me to tell you what I consider the best method, it is for you, if you are afraid to incur the cost, to do the next best thing in your opinion. I am not going to be driven from my point that lime is the best thing. If you can't do that there is nothing more to be said. It is for the expert to give the best advice; if you can't do that you must do the next best thing. It does not alter the advice from my point of view. In your case and under your conditions, you may be perfectly right; but it does not follow that the next man is right to follow your method. It depends on so many things, on your prices, on your yield and so many things that do not concern me at all, as, for instance, the condition of the estate or the position of the firm behind it. I can quite understand that with low prices and in a bad year with extra calls on your resources, it would be quite impossible to apply lime, but that does not alter my opinion that it is the best way. When you ask me whether you are doing Rs.46-8 worth of harm by forking I think you do.

Mr. BARBER said that the difference between liming and forking in Mr. Danvers' figures was wrong. The forking had to be done every year, while one application of lime lasted six years. This had to be taken into consideration in counting the cost.

Mr. ANSTEAD pointed out further that if the planters combined in a sort of co-operative business they would be able to get lime at less than Rs.20 per ton.

Mr. P. G. TIPPING.—In the matter of combating stump rot you advise the application of quick lime.

Mr. ANSTEAD.—Yes, when you use lime for fungus you are using it as a fungicide. That is why I say apply quick lime.

Mr. DANVERS.—Do you think the lime in nitrolim is capable of acting as a fungicide?

Mr. ANSTEAD.—Yes, in a way, but the beauty of nitrolim is this: You put it in instead of nitrate of soda; nitrate of soda is an acid manure and the result is that you make the soil acid. Our soils are already acid, so if you put in nitrolim, instead of making the soil more acid, you are making it sweeter. There is another great reason for using nitrolim, we can make nitrolim extremely cheaply if any firm would take it up. It is made by an electrical method and the dynamos are driven by water power. Of all the countries where cheap water power is available, India is the cheapest. If this manure was taken up by the ryots all over India, I feel sure that it would be taken up by the Government, who would subsidise some firm to undertake it. If this were done it would be the cheapest fertiliser on the market.

Mr. KRUMBIEGEL said that the question of utilising atmospheric nitrogen was important. There was an enormous amount of water

power in connection with Sivasamudram, and he hoped that it would be possible to utilise the waste of power there in this direction. He had had some correspondence with a firm in Europe, but the only question was what likelihood of a market there was. They were quite ready to undertake the work, but they must establish a market for it before they could get it manufactured here.

Mr. P. G. TIPPING.—In connection with nitrolim, has your attention been drawn to the heat it generates? We mixed it with dust and fine soil, but it was so hot that it could not be handled.

Mr. ANSTEAD said that his attention had not been called to the fact. Their duty was to call the attention of the firm who supplied it to that point. It meant that it was not made properly and that they were getting a low grade of stuff. It was advertised as the one thing that nitrolim would not do.

Mr. TIPPING said that what he had described was his own experience.

Mr. ANSTEAD said that the Coorg Association should call the attention of the firm they were dealing with to this point.

Mr. ANSTEAD added that he had used nitrolim in the Anamalais. It certainly did not get hot. It got warm, but not so hot that it could not be handled.

Mr. DICKINS said that he had tried it on the Shevaroyes and found that it got so hot that the coolies could not handle it. He had to apply some soil before they could use it. His experience of nitrolim as a fertiliser was satisfactory. It seemed to strengthen the trees; after about 3 inches of rain, he could see the effect on the trees.

Mr. TIPPING said that later on he hoped to be able to compare the effects of plots done with fish composts. He would be glad to publish the results in the *Planters' Chronicle*.

Products.

Mr. KIRWAN (Bababudins) said that he had some camphor trees but not many. In about 1905 he got two camphor plants, because he wanted to see if he could get anything out of it. He had met a man who had been stationed on the Burma frontier, who told him that the Chinese distilled camphor in a small way and described how it was done. He tried the experiment and got camphor all right; but he would like to ask the Scientific Officer what percentage of camphor he could get. He was only asking for information.

Mr. ANSTEAD said that he had notice of the question and had prepared the following answer which he read:—

Camphor.

The most extensive experiments with the distillation of camphor of which I can find any record, are those conducted in the Malay States in 1909, which gave the following yields of camphor and oil:—

Leaves	...	1 %
Shoots	...	0.22 %
Wood	...	0.66 %
Roots	...	1.2 %

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Leaves	1 $\frac{9}{10}$
Shoots	0.22 $\frac{9}{10}$
Wood	0.66 $\frac{9}{10}$
Roots	1.2 $\frac{9}{10}$

Hooper obtained a yield of $1\frac{1}{10}$ of oil from leaves of plants grown in India yielding up to $75\frac{1}{10}$ of camphor.

Experiments on the whole show that a much larger percentage of camphor and oil is obtained from the leaves than from the young wood or twigs and that a yield of at least $1\frac{1}{10}$ of camphor with a small percentage of oil may be expected from the prunings of 5-year old trees and probably from younger trees than this grown at an elevation of 2,000 to 6,000 feet.

It was found that all the camphor and oil distilled over within three hours and the greater portion within the first half hour after the steam began to pass through the material.

It is necessary that when once the distillation begins the heat should be reduced to a minimum; so that very little steam passes over with the camphor, and also that the condensing water should be cold and abundant and that it should flow in the opposite direction to the distillate.

The amount of camphor which can be obtained from the oil appears to depend upon the temperature; more camphor can be separated from the oil by cooling and also be re-distilling it preferably under reduced pressure or with steam. The camphor is much more valuable than the oil, though the latter has an extended use.

For distillation purposes the leaves and twigs should be cut up into small pieces by means of a chaff-cutting machine. In the experiments quoted above a still was used, of which the following description is given:—

- “(1) *Boiler*.—On many estates where rubber and other produce is grown the question of steam has already been settled, and there would be no necessity for another boiler. For experimental purposes, however, a small boiler had to be erected. This consisted of a simple cylindrical boiler which was erected horizontally on a simple brick and cement foundation and was fired externally by wood. The boiler is fitted with a water level, and safety valve, together with an opening for filling at the top.
- “(2) *Still*.—A pipe from the boiler conducted the steam below a perforated plate in a plain cylindrical still, the leaves, wood, etc., to be distilled, being placed on the top of the perforated plate, the still being charged from the top. The top of the still was fixed by means of nuts and screws and rendered air-tight by asbestos rings.
- “(3) *The Condenser*.—The condenser was a kind of quadruple Liebig condenser, consisting of a verticle cylinder containing four copper tubes connected above and below with an air space. The tubes were surrounded with the cooling water, which was led in by means of a pipe over the bottom and flowed away near the top. The bottom and top of the condenser were fixed by means of nuts and screws and rendered air-tight by asbestos and were detachable for cleansing purposes. A short bent copper tube from the bottom air space carried off the condensed steam, camphor and oil, which was collected in glass vessels.

"The boiler, still, and the outer shell of the condenser were constructed of iron, the tubes of the condenser and upper and lower plates attached to these tubes were of copper. The following are the dimensions of the above apparatus and the capacity of the still in terms of fresh camphor leaves, prunings, and wood (the latter cut up into small pieces):—

BOILER	...	{ Length 2 feet 9 inches. Diameter 1 foot 9 inches.
STILL	...	{ Length 2 feet 6 inches. Diameter 1 foot 9 inches. Capacity in terms of camphor leaves 30 lbs. " " " wood 90 lbs. " " " prunings 50 lbs.
CONDENSER	...	{ Length 2 feet. Diameter 9 inches. Length of copper condensing tubes 1 ft. 9 ins. Diameter of copper condensing tubes 1 inch.

"Criticisms of apparatus: (1) The chief disadvantage of a metal (iron) condenser is the discolouration of the camphor by iron rust. If the condenser were entirely of copper there would be little or no colouration.

(2) Since practically all the camphor condenses in the condenser tubes and only the oil and water pass into the receiver, a tube condenser has the disadvantage that the tubes would soon get blocked. Apart from this the layer of camphor on the tube would form a non-conducting medium and lessen the efficiency of the condenser.

(3) It is difficult to clean out a tube condenser, and easily remove the camphor, though this could easily be done by a special scraper fitting the condenser tubes.

(4) The chief disadvantage of the particular still described is the time wasted in discharging and recharging.

The discharging could be hastened by having a lateral opening above the perforated plate, and made air-tight by an asbestos sheet.

(5) In a large still the weight of the leaves or wood, especially when wet, would tend to create pressure inside, by blocking the passage of steam. This could be remedied by using a series of perforated plates, a definite quantity of material (wood or leaves) resting on each.

"A better plan and one which would simplify discharging and charging would, perhaps, be a metal cage which could be lifted bodily out of the still by means of a crane or other mechanical device and easily emptied by inversion and replaced when discharged. This would also allow steam to enter the material from all sides."

For experimental purposes on a small scale a small copper still may be used with a separate boiler and a glass condenser of the ordinary Liebig pattern. To facilitate charging and recharging the still, the chopped material should be contained in a wire-netting cage which fits the still and which can be easily and quickly lifted out of it.

Mr. KRUMBIEGEL stated that at the last Ceylon Rubber Exhibition he saw a still that had been invented by Mr. Bamber. It contained all the improvements prompted by experience gained in the East. It might be worth Mr. Kirwan's time to apply to Mr. Bamber for details.

Mr. KIRWAN.—How long does it take camphor plants to produce seed? I know one that has been in existence for 15 or 20 years, but up to the present it has shown no signs of producing seed.

Mr. ANSTEAD asked Mr. Barber how long Mr. Pascoe had been at Woodlands on the Nilgiris.

Mr. BARBER replied, about 24 years.

Mr. ANSTEAD.—I believe Mr. Pascoe planted a camphor tree about 8 or 9 years ago. That tree fruited in 1909, and bore about half-a-dozen seeds. Those seeds failed to germinate. Last year again it bore seed which did germinate. It took that tree about 9 years to bear fruit.

Mr. KRUMBIEGEL said that the big tree in the Lal Bagh was over 10 years' old. Camphor trees varied very much in germinating properties just as they did in producing camphor. He believed that in Formosa 6 years was generally the period in which camphor trees came to perfection.

Mr. ANSTEAD said that the proper way to propagate camphor was to get plants from the roots. They used to do that in the West Indies. The plants there never bore fruit, but they used to propagate them from the root suckers.

The CHAIRMAN.—Have you any information about the amount of pruning camphor trees will stand?

Mr. KIRWAN said that he got about 30 lbs. of leaves and twigs from his tree.

Mr. KRUMBIEGEL said that in Formosa they cut the trees down. But if they had a plantation the proper thing to do would be to keep the trees going as long as possible. He rather thought, therefore, that it would be more advantageous to cut the branches rather than to strip the leaves. As a matter of fact the trees could stand very heavy pruning.

Mr. KIRWAN.—Mr. Herbert Wright gave that advice in Ceylon many years ago.

The International Rubber Exhibition.

No notice of any Resolution having been given on this subject, it was allowed to drop.

Prevention of Thefts of Rubber.

Mr. PLOWDEN (Malabar Coast Planters' Association) said that he had been told that he could not bring up this matter unless his Association had first approached the Durbar. He had telegraphed to the Durbar and had ascertained that they would consider the question.

The CHAIRMAN.—Then it only remains to approach them first.

The CHAIRMAN.—Mr. Cook, can you tell us something about the proposed legislation in Travancore.

Mr. MARTIN.—Mr. Richardson introduced a Bill into the Travancore Legislative Council.

The CHAIRMAN.—It has not been passed yet?

Mr. MARTIN.—No, but it will be.

The Planters' Benevolent Fund.

The CHAIRMAN.—We have a Committee to manage these funds. With the series of accidents that happened recently, this Committee has resolved itself into myself. The Committee is to consist of the Chairman, Vice-Chairman and Planting Member. In view of the events of last year do you consider three members sufficient?

Mr. ABBOTT.—Yes, any proposal for help generally comes from the District Association.

The CHAIRMAN.—It is not only that, it is the question of the funds. At present as the rules stand the Committee has no power to add to its number. Would any gentleman like to suggest that a rule be added empowering the Committee to add to its number.

Mr. ABBOTT.—In case of necessity.

The CHAIRMAN.—It is usual to give unlimited power. Is it your intention to appoint the same Committee as last year? In that case you can propose the same Resolution as that of last year, adding the words "with power to add to their number."

Mr. BALL (Coorg).—I have a Resolution to propose. Some members of the Benevolent Fund have pointed out that they have no vouchers to show for their claim on the Planters' Benevolent Fund. I therefore propose that vouchers be granted by the U. P. A. S. I. to all subscribers to the Planters' Benevolent Fund.

Mr. MARTIN (Kanan Devan) seconded.

The CHAIRMAN.—I think the wording of the Resolution will have to be altered a little, because this is a quite separate fund. It is not a matter for the U. P. A. S. I. to issue vouchers. It is a separate fund, of which the Secretary of the U. P. A. S. I. is the Secretary and the Office-bearers of this Association serve as a Committee. We keep our accounts separately and the money is invested separately.

[IN COMMITTEE].

Mr. KIRWAN.—I thought that under the rules the Honorary Secretaries of District Associations are empowered to collect money and issue receipts. Is not that sufficient? Does not that act as a voucher.

Mr. BALL.—Some members complain that there is nothing to show except the Honorary Secretary's receipt for the money.

Mr. DICKINS.—Are not the receipts published in the *Planters' Chronicle*?

The CHAIRMAN.—It was done, and we intend to renew it.

Mr. DANVERS.—Except the Committee is prepared to issue policies, I don't see how you can expect more. Do your members require stamped receipts?

Mr. TIPPING.—Would it not meet the case if we had a printed receipt headed : “ Received for the Planters’ Benevolent Fund ? ”

The CHAIRMAN.—I rather think that the point raised by Mr. Ball is a very proper one.

Mr. BARBER.—Would not Mr. Tipping’s suggestion meet the case ?

The CHAIRMAN.—No, he is not a member of the Fund, only as a matter of convenience he collects the money.

Mr. ABBOTT suggested that Honorary Secretaries should get a receipt from the Secretary of the Fund and send it to the subscriber.

The CHAIRMAN.—I think we must rely on Honorary Secretaries to do the secretariat work as much as possible, but the question of separate receipts I quite agree with.

Mr. DANVERS.—Would it not do to have printed receipts sent to the Honorary Secretaries of Associations ? If a man chose to alter his abode he could intimate the fact.

The SECRETARY said that there was no difficulty about issuing receipts, provided Honorary Secretaries would send detailed lists. He thought the question had to be considered in connection with one still to come about the dating of receipts. A receipt should be complete in itself and as such should contain the amount of subscription from such a date to such a date. These forms had better be sent to Honorary Secretaries in order to save postage. The whole object was to save their funds as much as possible. If he sent a whole batch to Honorary Secretaries, the expenses would be reduced very much. He had received from Honorary Secretaries of District Associations remittances without any details whatever. Honorary Secretaries must send him all particulars. It would involve going back to the beginning and finding out the details of all remittances that had been sent him in the past.

The following Resolutions were then carried in Committee and affirmed in Open Meeting.

“ That vouchers from the Honorary Secretary to the Fund be issued to all subscribers to the Planters’ Benevolent Fund.”

Proposed by Mr. W. M. Ball and seconded by Mr. A. Ff. Martin.

“ That the financial year of the Planters’ Benevolent Fund be the same as that of the U. P. A. S. I., namely, from the 1st July to the 30th June.”

The CHAIRMAN.—I notice from the Secretary’s Report that some firms in London have collected considerable sums for the benefit of the Fund. I should like to propose a vote of thanks to Messrs. T. H. Allan & Co. for their assistance in this matter.

The delegates then adjourned for the day.

Fourth Day, Thursday, August 31st, 1911.

The delegates met at 11 a.m., when the discussion of the Labour problems of the planting industry of South India commenced.

Recruiting and Emigration.

Mr. A. Ff. MARTIN (Kanan Devan), in opening this subject, said :—

Mr. CHAIRMAN.—With regard to cooly emigration, the Government of Madras have declared themselves satisfied with the existing condition. I do not propose to ask you to bring any new fact, observed by myself, before Government, nor to ask you to put any proposal to this Meeting requesting Government for assistance, because among other reasons past experience has shown us that the Government do not see their way to grant requests of this nature of planters in Southern India. They have, however, always given a ready hearing, and extended their sympathy to planters across the sea. I wish, therefore, to quote a letter from Mr. D. G. Bremner, of Kew Estate, Norwood, Ceylon, to the *Times of Ceylon*, which was copied *in extenso* in the *Madras Mail* of the 4th May, 1911. As it originates from Ceylon, it may have some weight with the Government of Madras.

“When I got to Madras, after some trouble I discovered the Ceylon Labour Agent, and when he heard I had a motor he was “dead nuts” on coming with me on a labour-recruiting expedition, if I could get Mr. Rowsell to let him go. I obtained leave from Mr. Rowsell by wire, and off we started. We were to proceed first to Arkonam and thence to Katpadi passing through Arcot. The so-called Ceylon Labour Agent, a Hindu, of course, said he knew all about the roads, and that they were in A-1 condition. I, therefore, did not trouble to find out the best road to Arkonam. About half way it was quite apparent that the Ceylon Labour Agent knew nothing about the roads whatever, and after getting into some really awful places and being told that there were two rivers with water 3 feet deep in front of me, I turned back and made straight for Katpadi. On the 30th April I went off to the agency to recruit coolies, while my friend recruited bugs in the wretched dāk bungalow. The Ceylon Labour Agent’s method of producing coolies is to introduce you to a Tulican more or less covered with massive gold cable chains and gold watches, for all the world like one of the good old African slave dealers. The Tulican at once proceeds to business by asking how much you are prepared to give. “How much do you want,” said I? “Rs. 40 a head,” said the Tulican. I gave a shiver. With Rs. 12 to Rs. 14 to land the coolies on the estate, this means Rs. 52 to Rs. 54 per head for a coast cooly. Out of this I may say the cooly receives Rs. 3-12. I arranged to give the Tulican Rs. 33 per head, and 11 coolies were produced on my giving my word that I would say nothing about what I had paid the Tulican to the coolies. These coolies all consented to come to Kew Estate, the Madras and Katpadi Labour Agents giving me the most solemn promises that the balance of 50 coolies I wanted would be sent off practically immediately, on the understanding that I paid the Tulican at the rate of Rs. 33 per head. Needless to say, not another cooly did I ever hear of. The game is too good. The Tulicans, who have

the whole business in their hands, simply pit one Ceylon kangany against another; the coolies are rounded up and kept hidden until the bargain is struck; and the highest bidder, generally a rubber estate, gets them. Paying the Tulican Rs.40 a head, plus landing coolies on the estate, means quite Rs.55 per head, of which the cooly has received, say Rs.3-12. These Moormen are making simply lakhs of rupees. A European can recruit far better than one of our old-time kanganies, but he must take his bedding and not worry about bugs. He can generally get his food at the railway station. I believe that to go over and stay at Trichinopoly is of no more use than staying in one's own bungalow in Ceylon. The professional recruiter for Assam has been entirely stopped by the Indian Government, and I heard from several sources that the professional recruiter for both Ceylon and the Straits would shortly follow suit, unless matters were put on a sounder basis. Here is a chance for the Proprietors' Labour Federation, who many men say seem to be bent on bringing advances up to a good old Rs.45 per head all round.

"Now for the sequel of my labour-recruiting expedition. I may say that I could not, stay any length of time as I had to get back to the estate. Eleven coolies were despatched from Trichinopoly after being kept there for a week awaiting the arrival of the others, who, of course, never turned up after I had left Madras. One man, a *nalla terrinjal* who had worked in the Mysore Gold Fields, was given Rs.73 of the estate's money to pay for the coolies' food, etc., though why it was given to him I cannot say. Anyhow he arrived here with the nice little sum of Rs.30 in hand. Three days ago the *nalla terrinjal* bolted, taking with him his wife, one new cooly, and two more coolies who came over last year. I intend to hold the Ceylon Labour Commissioner responsible for their debts, which amount to Rs.366-5-2.

"Perhaps I may be forgiven this screed as it may give the ordinary Superintendent an insight as to how things are being worked by the Labour Recruiting Agency."

It is, perhaps, superfluous to remind you that this money paid by the Ceylon planter, Kangany or Maistry to the recruiter in India, called a *Tulican* in the letter I have read to you, is put down against the Kangany as "an advance," and he in turn looks to the cooly for its reimbursement, the cooly having thus to repay money for a debt he never incurred. This, apparently, does not matter. Coolies are bought or sold at so much a head, but the Government of Madras are satisfied with the present conditions. You will notice I have not mentioned other countries than Ceylon, and my reason is that coolies for those countries are landed free of debt.

Let us investigate a little further the attitude of Government in the matter. In the *Fort St. George Gazette* of the 6th June, 1911, answer 104, the following reply to a question is given:—"The Government are aware that wages have risen during the last twenty years, but they do not know whether they are still rising. It is a fact that large but apparently diminishing numbers of labourers emigrate to foreign countries. The Government see no reason to impose any restrictions on such emigration beyond those now in force." Meeting greater competition as we do every year, it is strange to us to hear of the apparently diminishing numbers of labourers emigrating to foreign countries. All this makes it quite plain, how-

ever, that there is no use in turning to Government for any treatment in sympathy with our former desires, and I am, in fact, now ashamed that I ever did turn to Government for legislative assistance, because I cannot see that we as a corporate body have done anything to deserve it. I do not understand the present attitude of Government, but I would understand it quite well if it was based on the fact that we had taken no steps to help ourselves. Before coming to the question of what we can do as a corporate body, let us look at what our competitors do. For one thing, they advertise extensively. Has the U. P. A. S. I., ever advertised? The answer is that we have neglected one of the essentials of business. I am about to propose that we now set this one point right; we must humbly follow in the footsteps of our rivals, and, therefore, the lea-way to be made up is very great. It is no use advertising a bad article; we must be sure that what we advertise is attractive and sound. We must see what holes we can pick in the advertisements of our rivals and our circulars must be worded accordingly.

I propose therefore:—

“That the U. P. A. S. I. get printed as many circulars as required by the daughter Associations for broadcast circulation among the villages of South India.”

At first sight it would seem just as good for each Association to undertake the printing of its own circulars, but this misses my point, which is that the circular should be issued by the authority of the U. P. A. S. I. The wording would have to be in general terms, and on to each circular would have to be attached a continuation of it to suit the peculiar conditions of the district desiring to advertise. The circulars would have to be in different languages. The cost of printing would have to be borne by the U. P. A. S. I., out of the Reserve Fund, perhaps, and the cost of distribution by the districts concerned. As I am not anxious that our rivals shall have an advance copy of the circular we may decide upon, or have any knowledge of what holes we may be able to pick in their advertisements, I shall presently ask, Mr. Chairman, that this Meeting adjourn for the purpose of considering the matter, but before that it will be well to have in Open Meeting and in Committee, the views of other planters present. The proposal I have made should, I think, first be put in Committee, for if the sense of the Meeting is against me, it will not be necessary to take up further time in reading circulars, and in discussing the matter.

Mr. ABBOTT seconded the proposal, which was carried unanimously.

Mr. BARBER (Nilgiris and Anamalais) then said:—

SIR,—Although debarred by last year's Resolution from ploughing the sand of Act I, I am not going to break entirely new ground on the matter of labour. You will all remember Mr. Brock's Registration Scheme, and the lucid way in which he put a difficult subject before us. The Anamalais feel that steps should be taken, and taken quickly, in the matter of recruiting and emigration, and, though they have themselves adopted Mr. Brock's scheme as possibly the best means of finding a solution, they do not insist on pressing it; they merely ask that since that scheme does not meet with the general approval which they think it deserves, a further effort shall be made to produce a scheme that will meet with general acceptance.

We must remember that any scheme we adopt must be one that will find favour with Government, for I do not think that any solution of the labour problem can be arrived at without legislation. I know that some of us have felt that it was useless to ask for further legislation on labour matters, considering the reception we have given the last effort of the Madras Government in that line, and two years ago I urged the general acceptance of Act I, if only as a stepping-stone to further legislation. We must hope that Government will constone with sympathy any sound proposal we put before them.

I believe that one of the objections that was taken to Mr. Brock's scheme was that Government would never sanction it on the score of expense. Well, gentlemen, I think that expense will have to be faced whatever scheme may be adopted, in fact, we are facing an annually increasing expense already. Do you not think it would be wise to admit this to ourselves, and when submitting a scheme for special legislation to the consideration of Government, at the same time offer to bear the expense of initiating and maintaining it, if only to prove that we are in earnest? If we are in earnest, if we can unite and insist unitedly, we may be successful; otherwise we cannot be. Government may smile if we claim that the planters of South India are an asset to the Empire, but perhaps the official memory is short. Less than a generation ago there was another labour problem before Government, a more terrible one, and planters were thanked by no less a person than the Viceroy himself for the way they came forward and did their best to assist some out of the starving thousands of their fellow subjects. To turn one moment to the financial part of the matter, the cost, if unconsidered, may stagger you. This is not a case of a paltry 8 pies or 8 annas an acre, we are dealing with nothing so insignificant as the Scientific Officer's scheme.

I have here a speech prepared by the Chairman, Honorary Secretary and Delegate-elect of the A. P. A., which, if I may read it, will show you that there is money in abundance if only it be forthcoming:—

“There is one point wanting in the history of this Association, which no observant planter can view with anything but profound regret. Year after year labour problems have been discussed, but are still unsolved; in fact, this Association owes its very existence to labour difficulties; our Books of Proceedings from cover to cover are full of warnings uttered by many of the ablest men in planting history. This inaction is all the more deplorable as the methods of labour recruiting are steadily becoming more corrupt with increasing competition for labour, and the pressure placed upon their employees by Companies requiring rapid extensions in tea and rubber. As far as labour is concerned, the old code of planting etiquette and honourable friendly dealings amongst ourselves is being cast aside and its place is being gradually usurped by uncontrolled and unprincipled methods of cooly snatching and an increased war of rates and advances. For this we cannot entirely blame the individual Manager and Managing Proprietor, whose very existence depends on the work that he turns out, nor can we entirely blame the employers, as they have capital which they have undertaken to invest and therefore must carry out their projects. I maintain, Sir, that we have no one to blame but ourselves as a body.

"Representatives of the various districts have come here year after year with first one proposal and then another, which are either refused or shelved with monotonous regularity, and to-day we are no nearer even an approximate solution of the problem than we were 20 years ago. A house divided against itself cannot stand. Here in our planting enterprise, capital is fighting against capital and is playing into the hands of labour to such an extent that a continuation of the suicidal policy must lead to disaster. A former Chairman of this Association expressed his belief that these difficulties would right themselves in time. This is leaving things to Providence with a vengeance, but Providence helps those who help themselves, and what about the law of the survival of the fittest? It is very easy to say that the weakest must go to the wall amongst ourselves, but what if the planting industry as a whole proves to be the weakest in the competition against not only the rivalry from across the sea, but also rivalry from the rapid improvements and consequent expansion of all agriculture in India, and the general demand for labour throughout this country? Are we to sit down in abject apathy and allow ourselves as a community to be crowded out in the struggle for existence, are we going to allow the cancer of unprincipled methods of recruiting to spread unchecked and undermine our long-standing reputation for honest and straightforward dealings with our labourers and with one another? This cancer is a disease which is poisoning the mind of every estate labourer and educating him to take advantage of the present chaos in which he can with impunity and profitably evade the law and spend his life in an existence which may well be called a defaulter's paradise. Some proposals which have been mooted in the past have been rejected on the score of probable expense, yet we are already raising rates and advances in these times of boom, without providing for the day of reckoning when we may have to reduce the cost of production, when with a swing of the pendulum production of tea and rubber overtakes the demand again, and coffee is a thing of the past. If a tithe of the money being so recklessly squandered in the war of rates and advances now in progress were devoted to united efforts in dealing with our labour problems, it would amount to an enormous sum, and would be money profitably spent in an endeavour to insure labour peace. To particularise, taking the total amount of labourers employed on estates in South India at about 150,000, an all-round increase in this war of advances of only Rs.5 per cooly entails an outlay of £50,000. Now, even if the whole of this amount were recoverable, a thing which I will never admit, it is money lying idle. I have not the slightest hesitation in estimating that the increase in outstanding advances during the past five years is even a greater sum than this, and the next five years will see an equal increase, if not a greater, unless some steps are taken to regulate recruiting. The interest alone on this sum of money would be sufficient to lavishly maintain the most elaborate registration scheme that any one could devise.

"So much for advances, but what of about rates? One estate after another is raising its rates an anna a day for every single cooly employed; now if our labour were really badly paid, this rise in rates would not only be natural, but absolutely just. But, as it is, labourers are living in, for them, comparative luxury on one-third to half of their pay, and in the case of tea plucking women in heavy flushing districts on one-sixth of their pay. Hence, for the welfare of the labourers, an increase of pay is by no means necessary and, in fact, I would go so far as to say that for the welfare of India an increase of pay is the

surest way to spread unrest. With rates of pay rising all round by leaps and bounds, a cooly can pension himself off for life after a very few years' work and then retire. Satan always find work for idle hands to do, and the village gentleman with no inducement to work falls an easy prey to sedition-mongers, and his children are educated to look down on their father's former occupation. Now for the financial aspect as it affects us. Have you realised what an anna increase per head per diem to every cooly employed on every estate in Southern India means? A very conservative calculation will show you that such an increase would cost the planting industry in South India £150,000 per annum. A good proportion of this is being wasted already, as a large number of estates have raised their rates in the past few years. We are rapidly approaching the point when we will be wasting the yearly interest on a capital of 2½ millions sterling and incidentally ruining the morale of the labourer. With all due deference to Mr. Anstead's expressed opinion, the Scientific Department fades into insignificance before this great question and science can do nothing for us in this direction. Planters have often been accused of a want of business capacity; here lies the opportunity to prove the reverse. It is surely possible for our best business men, with the support of the Directors of the many large planting concerns, to evolve a scheme that will deal adequately with this most urgent question. The figures I have quoted show that money is available, and no opposition on the score of expense can be conscientiously maintained."

Mr. Barber then proposed the following Resolution:—"That this Meeting views with alarm the total lack of combination amongst planters in Southern India as regards labour problems generally, and trusts, therefore, it will adopt Mr. Brock's registration scheme (or some such similar scheme) and do press it on the attention of the Government, offering Government to bear all the expenses in connection with the scheme."

Mr. DANDISON (Nilgiris) seconded the Resolution.

[IN COMMITTEE].

The CHAIRMAN.—I observe that Mr. Barber does not definitely demand the adoption of Mr. Brock's scheme. All he asks you is to endeavour to amend it as far as possible.

Mr. DANVERS (N. Mysore).—Some sort of labour law, some sort of registration scheme, seems necessary. What I cannot understand about these various schemes is how they are going to prevent competition from outside. Last year Mr. Martin brought forward a suggestion about approaching Government for legislation and Mr. Brock brought forward a registration scheme, but I can't see how these would in any way reduce the pressure from outside. But the Government has rejected both these suggestions. If you have registration you may ensure right coolies going to the right place; but I can't see how it is going to reduce the outside pressure which is at the bottom of the whole trouble. If we pay 9 annas a day Ceylon will pay a rupee; if we pay Re. 1 Ceylon will pay Re. 1-8. So long as this keeps up what scheme can we possibly formulate to reduce these outside prices? If we can get rid of that, we can settle our troubles as we did in the old times. If it can be shown how the outside pressure can be reduced, I don't see the necessity of raising the rates, if we pay the coolies sufficient now. Circumstances, of course, alter in

different districts. Mr. Brock says that his coolies earn sufficient to retire after a short time. That is the class of cooly he has. My cooly is different; if I pay him more he sits down more days and does less work, so I am practically reducing my labour. I am against raising the pay; it ruins the cooly and reduces your labour. But what are you to do in the face of the outside competition? Ceylon sends men all over the place; we have the Ceylon recruiter at our own doors. They get hold of our coolies, who are induced to leave possibly by fraudulent promises of the recruiter or by promises of larger pay to desert. We can't offer these inducements. Coffee may be moribund, but it still requires labour, and we are not able to pay these enormous wages, but I have not yet heard of any scheme by which we can reduce outside competition.

Mr. BARBER.—It is not altogether a matter of reducing unfair competition from outside.

Mr. DANVERS.—Yes, it is very largely.

Mr. BARBER.—Would not Mr. Brock's scheme reduce unfair competition to a certain extent?

Mr. DANVERS.—Mr. Brock's scheme might do that; but it has always struck me as being so involved and complicated.

Mr. BARBER.—The Anamalais are not wedded to Mr. Brock's scheme, but they want something on the lines of that scheme.

Mr. DANVERS.—It would involve the formation of another Government Department.

Mr. BARBER.—If it did, could we not pay for it?

Mr. DANVERS.—We have never heard yet what it will cost. We are being asked to grant the cost of something about which we know nothing—whether it will cost a lakh or a million.

Mr. BARBER.—We can't estimate the cost until some one devises a scheme.

Mr. DANVERS.—I am quite prepared to consider one.

Mr. PLAYFAIR (S. Mysore) said that his Association was in sympathy with a scheme such as that of Mr. Brock, or another scheme on the same lines. They were not only losing their coolies, but the cooly would in course of time not very far distant become non-existent. They were not retiring on their pay, but on the advances for which they did no work. He did not think the cost of the registration scheme should be materially considered. If they did not have a registration scheme, they would be in such a bad way that they would not have anything to work at all; they would not have any coolies. That is what it amounted to. But the registration scheme should confine itself to the maistries and not to the coolie.

The CHAIRMAN.—I should rather like to hear from the different districts whether there is any serious difficulty about the maistries with reference to what Mr. Playfair has said. Mr. Martin, do you think that the maistries are to blame.

Mr. DANVERS. (N. Mysore) said that he was unable to give exact figures, but he had heard recently that one planter who needed coolies had sent Rs.2 000 with his supplier to get the coolies, but

they had all waltzed off to Travancore. From every side he heard this complaint, the supplier came and said that the coolies had all gone to Travancore. He was not blaming Travancore; he had not the slightest doubt that their suppliers told their masters that they had got coolies who were not under advance and he had no doubt that the suppliers had told their coolies to say that they did not owe any other supplier money. He had heard of men lying in wait on the Mangalore-Mysore Ghât for coolies that were actually on their way to the estates and decoying them away. How this sort of thing was to be prevented he did not know. It was no use piling it up on Travancore and Cochin; they could only accept their suppliers' assurances. He knew several cases of people having given large advances and getting no coolies. Just before he came to the Meeting he had received a letter from a large planter asking him to rub it in in describing how coolies were stolen and marched off to some other District. He did not see how he could rub it in; he did not know what could be done. He would be glad of any suggestion from anybody at the Meeting.

Mr. F. M. HAMILTON (S. Mysore) said that the only way for them to have some sort of control was to have their maistries not only registered, but registered as belonging to a certain district. Supposing they left and took up some other employment, then their names should be altered on the register. Some simple sort of registration should not be financially impossible. Registered maistries would have their names on the list as belonging to a certain district. Until they got instructions that a man had paid up all he owed, he would remain on the register as belonging to that district and no other districts would be allowed to employ him. There remained the case of the maistry being registered under different names in two districts; but a system of finger-prints should be provided.

Mr. BARBER thought that registration might be of some use, but the people who required protection were the maistries themselves. He thought that a lot of their old maistries had done them well in the past and were quite prepared to continue to do so.

Mr. P. G. TIPPING quite agreed that the maistry was in need of protection. The case Mr. Danvers had mentioned was not the fault of the maistry at all. The men were crimped in a way that the registration of the maistry would not help at all. Generally speaking, registration should be applied to the coolies.

Mr. BARBER.—In regard to the cost of registration how do you pay your maistries? Ten per cent is the general rule, I take it. Supposing we paid another 5 per cent., would it not be worthwhile?

Mr. DANVERS.—I should think so. Continuing, Mr. Danvers said that he quite agreed with Mr. Tipping that they should begin with the coolies. The coolies were swindling the maistries, and in course of time the maistry would have to swindle the planter. He knew of a case of a maistry who slept for 15 nights on the station platform at Mangalore, because his coolies were taken away from the Railway. Here again they came back to the crux of the whole question, namely, the competition that existed at the present time. Travancore paid 50 per cent. more than they did in Mysore, and whether they had registration and thumb marks did not alter the fact. In Travancore they got 6 annas a day for picking tea and bathing, while in

Mysore they wanted them to work with a *mamootie* for 4 annas a day. No wonder the cooly bolted. Travancore in its turn had to meet the competition of Ceylon. Mr. Abbott, referring to the question of the registration of coolies, said that they might register a cooly who was as well known as any gentleman in the room and as easily identified; but that would not prevent him paying up his advances and going elsewhere. The fact of his being registered was no help; he would go. They might pay what advances they liked, but under the law they were not allowed to detain a man. If he gave three months notice and paid up his advances he could go. It was the same in Ceylon. He saw a speech made recently at the Annual Meeting of the Empire of India, in which he said that they were paying as much as Rs.150 per head for free coolies landed on the estate. Touching on the question of outside competition, the same gentleman said that the Government of India were quite willing to help in every way the people who went to India in search of labour. Yet they would not help the planter in India. That was Mr. Martin's point and he was absolutely correct. They might register coolies as much as they pleased, but they would not get coolies to work for 4 annas when they could get 6 annas next door and from 12 to 14 annas in Ceylon and the Straits.

Mr. Danvers said that it seemed to him that the subject ought to be definitely divided into two heads; one that of procuring their labour and the other that of safe-guarding their advances. The labour problem was simply one of supply and demand. They could not prevent gentlemen in Travancore offering 6 annas a day, if they found that for 6 annas the coolies were prepared to go elsewhere. He could say nothing about the contentedness of Mr. Brock's coolies, because he knew nothing about them, but as regards his own coolies he could assure the gentlemen in Travancore that unless they could devise some means of making the man work, higher pay would only induce him to sit down more, develop fever to an enormous extent, and want larger privileges on the ground of having larger pay. He did not see how they could interfere at all; unless all districts united in giving the same pay they could not prevent the coolies moving from one district to another. Competition was at the bottom of it. On the other hand as to their money losses what they could do by registration and legislation was to ensure the smallest loss of advances to themselves. He did not think they ought to mix up the two things. Let them try and get registration and legislation; they would help to recover advances from absconding coolies or maistries. As regards the labour problem, he did not know what to do. If he wanted labour and could give a rupee a head per day for it, he would give the rupee. As he could not he would like everybody to give 4 annas.

Mr. F. M. HAMILTON asked if it would not be possible to devise a scale of labour rates, whereby a planting District close to the home of the cooly should pay less than one at a greater distance. As regards the other question it was proposed in South Mysore to establish agencies to help the maistries in looking after their coolies. Many men had taken exception to the registration of maistries; they said that they wanted help with the coolies. By the addition of agencies in different headquarters which employed overseers to look after labour he thought that something might be done. If a man was registered as belonging to a certain estate by which an advance had been paid, and if this advance was not repaid, he should not be

allowed to go to any other estate. The man who first advanced the money to the cooly should have the first right to his services. If they were inclined to work the coolies into the registration scheme it would work in the same way with them. It seemed the ultimate scheme to which they would all have to come.

Mr. DANVERS.—What I understand Mr. Hamilton to advocate is the extension of the Travancore rule to the whole of South India.

Mr. F. M. HAMILTON.—Practically that is what it would amount to. We should work on the same lines in our own Districts.

Mr. DANVERS said that he saw no objection to the various Districts uniting and framing rules. As regards uniform rates of pay it was absolutely hopeless. He did not believe in any such scheme.

Mr. ABBOTT.—Nor, may I add, would it receive the slightest weight with a superintendent who had certain work to do and saw no other way of doing the work.

Mr. DANVERS.—As Rome was not built in a day, would you be willing to commence with some such scheme as Mr. Hamilton's?

Mr. BARBER.—Yes, it seems a step in the right direction.

Mr. DANVERS admitted that they were in a difficult position in Mysore. If a man absconded to British territory, they could do nothing until he returned to Mysore. He did not know how many years it was since he had taken out a warrant under the Act. He always took an I. O. U. from his suppliers. They did not call them maistries in Mysore. They got rid of the men who came from actual cattle herding; but when they got a good man, he supplied the whole estate with labour. It was a certain system. From one point of view it was a weak system, because they were entirely in the hands of this man; but since they had adopted it, they had not had many losses. Now that the demand for labour was becoming more acute, some of the men were beginning to give trouble. They in Mysore could do nothing: they could not take out a warrant for men in British territory, nor even if a cooly went into another Native State. He presumed that in Travancore they were in the same boat, but they had the advantage of the 6 annas a day.

Mr. DANVERS.—Now, Mr. Barber, will you commence with some such scheme.

The CHAIRMAN.—I don't think that we are getting on at all. There is only one scheme before us, if you have another I should like a definite amendment.

Mr. DANVERS.—I don't mind proposing that, pending the drawing up of some such scheme as Mr. Brock proposes, we recommend the adoption of the Travancore rules among various districts.

Mr. MARTIN.—We in Travancore seem ignorant of the existence of Travancore rules. May I ask Mr. Danvers what they are?

Mr. DANVERS.—My Secretary wrote and asked for copies, but we have not received them yet. Some rules were published in the *Planters' Chronicle* which proceeded on similar lines to those they were now discussing and they seemed a fair way of getting over their

troubles. It was simply a gentlemanly settlement of disputes. If a man had given the first advance, he had the first claim on the cooly or he had the option of receiving the money he advanced and leaving the cooly where he was.

The CHAIRMAN.—Those are the *Mundakayam* rules. (Reads them).

Mr. BARBER.—They would do if you substituted "District" for Estate in each case.

Mr. DANVERS.—That is the idea.

Mr. Cook.—In S. Travancore we have several Districts, and each District makes its own rules,

Mr. DANVERS.—Can you tell us how the rules differ?

Mr. Cook.—The three Districts have practically the same rules.

Mr. DANVERS.—They are based on simple honesty and morality.

The CHAIRMAN.—There is one difficulty: suppose the cooly refuses to fall in with these arrangements?

Mr. F. M. HAMILTON.—In connection with that you must have registration. Otherwise you would have no control over the coolies whatever. I think the rules would have no effect as between one District and another.

The CHAIRMAN.—I think you must take the responsibility of tracing your coolies if you come to such an arrangement.

Mr. DANVERS.—If a maistry has reason to suppose that he will get a cooly when he does find him, it is very probable that he will find him. We cannot give up making rules, because of possible obstruction. Are you gentlemen willing to adopt rules of this sort? I don't insist on the text of these rules. I am only making the suggestion that we should treat each other in an honourable manner.

Mr. MARTIN.—I think I would like to say a few words on this subject. All rules, such as those read out to us, pre-suppose that the cooly is an inanimate object, a mere chattel. The cooly actually does say, "if you put us back on that estate we will bolt to our village," and more often than saying it, he does it. The cooly is therefore lost to both estates. If there was an attempt to enforce such rules and return maistries and coolies from district to district, the end would be that we should drive the cooly to emigrate—the very thing we wish to avoid.

Mr. DANVERS said that he did not agree. He did not know what was the opinion of coolies in other Districts; he did not know the Tamil cooly, he might be a man of the sort Mr. Martin had described; but the man from South Canara was not. He had heard of coolies saying that if they were sent to a certain estate, they would not stop a day, but would run away. They had since been on the estate for months and had not run away. They were always threatening things that they did not intend to do.

Mr. MARTIN.—What I have told you is from my own bitter experience; I have driven coolies to emigrate.

Mr. DANVERS.—I don't believe they were ordinary coolies. I believe your men were blackguards. In that case I am delighted to think that they are spending the rest of their lives as wandering Jews.

Mr. F. M. HAMILTON.—Is not your system, Mr. Martin, some sort of an agency with a registered list of maistries?

Mr. MARTIN.—We have no registration in the way you mean. I personally know the men I am dealing with.

Mr. F. M. HAMILTON.—That is what the agent's business will be.

Mr. CHAIRMAN.—If no other delegate has any information to give, I will put Mr. Danvers' amendment to the vote.

The amendment was put and lost.

Mr. DANVERS.—Now that my attempt at a scheme has failed, I would like to know if any gentleman has an alternative scheme.

The CHAIRMAN.—We will now resume the debate on Mr. Barber's original Resolution.

[IN OPEN MEETING].

On resolving into Open Meeting again, Mr. MARTIN opposed Mr. Barber's Resolution in the following terms:—

Mr. CHAIRMAN.—Let me once again express my admiration for the object of Mr. Brock's scheme, and for the thorough and capable manner in which it is worked out. The principle of prevention being better than cure must, as I have said before now, appeal to all of us. But the means proposed to obtain this end, are, I think, objectionable on several grounds. It is proposed that we ask Government for class legislation; for a law conceived in the interests of one class of the community, as opposed to the freedom of other classes. This is, I think, against the spirit of the age, but, if it is not, it is against my spirit.

To prevent a section of the Agricultural community of Southern India from the crime of swindling another section of it, a new crime is to be invented, the crime of being found without a registration certificate. These grounds alone are sufficient to deter us from asking Government to legislate in the manner proposed. There is an air of compulsion about the scheme which I do not like; the liberty of the subject is unduly interfered with. Just as in the matter of thrift compulsion robs it of all its virtue, so compulsion robs of any virtue it may possess the relationship of master and servant, planter and cooly. What is our aim in this matter? If we do not define our aim we are not likely to attain it. I take it our aim is to get coolies to do our work, and to induce them to remain with us. I was delighted, gentlemen, to hear our Chairman asking in his opening remarks if there were no ways, apart from legislation, in which we could improve matters amongst ourselves. Such a question from one who believes in legislation as a means of attaining our aim gives me hope that I shall yet convert him to my own way of thinking. At present I can only pervert a famous saying of a fellow countryman—"I smell a rat, I see it in the air, but I have no intention of nipping it in the bud!" I make bold to reply that there are ways apart from legislation by which we can attain our aim.

Coolies only leave India because they think, and are led to believe, that they can get better pay and prospects elsewhere. Has the U. P. A. S. I. ever done anything to show them that their pay and prospects are as good, all things considered, in South India as out of it? Nothing whatever. If we fail to make the conditions on our estates sufficiently attractive to labourers, and if we cannot take steps to show coolies the facts of the case, then we must abide by the consequences, and see our labour go elsewhere, to such places as are described in the following note from the *Home or Colonial Mail* of the 9th June :—

Referring to the labour conditions of rubber, Mr. Malcolm Cumming, General Manager of the Linggi Company, at the recent Meeting, stated :—“‘ In the Straits they had given considerable encouragement to coolies, and paid extremely good wages ; the work was very light and easy, they provided good housing, and treated the labour force absolutely fairly, and now there were numbers of people who went backwards and forwards to India, each time bringing more relations. This was what they were aiming at, and he was glad to say that many of the Kanganies working on the estates had been there from their early childhood. He did not think the Company would have the least trouble in getting any quantity of labour they required from India, which was their chief source, though they also employed Chinese and Javanese. At present it was not so difficult to get coolies as to keep them. Owing to the very large number of estates opened up and the large number of Companies formed during the last few years, the labour position had become distinctly acute. Managers were often prepared to pay a higher rate than that current. This condition of things, however, he did not think was likely to continue. On the Linggi Plantations they were offering inducements to the coolies in the way of savings banks, and a bonus scheme was under consideration, which they hoped would have the effect of inducing them to remain for two years at least.’ ”

These inducements are well in advance of anything we have thought of in South India. I oppose Mr. Brock's scheme, or legislation of a similar nature, Mr. Chairman, on the ground that legislation of the sort is a backward step, instead of a forward one—one suitable to the Middle Ages, but not to the 20th century—and also on the ground that we have not done all we could, without legislation.

In conclusion, as showing something of the spirit of the age, I quote from the *Indian Planters' Gazette*, which said, when commenting on the speech of Mr. Russel at this year's " Assam Dinner " in London :—

“ These are very sound views and should commend themselves with force to all connected with tea. They must realise that the demand for labour is extending to other industries ; coal, the mills, and other industrial enterprises that are springing up in all parts of the country, are all in need of labour, and there is, therefore, keen competition in the labour market now where there was none—appreciably—only a decade back. And it must not be lost sight of that there is a strong tendency in the direction of abolishing all forms of indentured labour and labour contracts in India ; and that within a measurable distance of time ‘ free labour ’ will be the rule rather than the exception, as it is now.”

Mr. DANVERS (N. Mysore) said that a great deal of light had been thrown on the state of the labour problem, but he did not think it had advanced the solution a single step. Mr. Martin's enlightening speech had simply shown them that the trouble existed in other directions and in other countries, as well as their own. He was not sure though that he could go with Mr. Martin as far as to say that they were exhibiting a Middle Ages spirit in the twentieth century. Personally, he thought that there was a little too much of the spirit of the twentieth century trying to deal with conditions of the Middle Ages. He did think that too much broadmindedness about liberty of action and freedom and all that sort of thing was being introduced into the question of dealing with coolies whose conditions approximated more to the period A. D. 3. Still, he knew that it existed and had to be allowed for under a Government that insisted upon treating the cooly and his employer as equals.

Mr. BABBER made the following reply upon the discussion that had taken place on his proposal:—

"The Anamallai Association moved this Resolution with a view to finding out if we as a U. P. A. were united in wishing to oppose unfair competition from outside. I cannot say that this has been proved by the discussion, and, perhaps, it is rather humiliating that the discussion shows that we consider it more necessary to unite in suppressing unfair competition among ourselves. However, I think that they would welcome any Resolution showing that we are united on any labour point whatever, and for this reason I should have been delighted if any amendment could have been made which would have met with general acceptance. And let me add that I hope some acceptable amendment will yet be made."

The CHAIRMAN then put Mr. Barber's Resolution to the Meeting. It was lost.

Mr. MARTIN (Kanan Devan) made the following statement on the question of new sources for the supply of labour:—

MR. CHAIRMAN AND GENTLEMEN.—Last year Mr. Danvers proposed "that a determined effort be made by the planting community of Southern India to tap fresh sources of labour, and that a representative Committee be appointed for the purpose of acquiring information on the subject."

This was carried and became a Resolution of the U. P. A. S. I.

The Committee appointed consisted of Messrs. Richardson, Tipping, Mead, Danvers and myself. For well-known reasons, only the last three were able to take any part in the matter, and to-day only two of us are here to face the music. After delays over which we had no control, a skeleton map was prepared by myself, and has been roughly painted, so as to show the positions of the various planting districts and those parts of South India from which coolies are recruited. It has not taught us much, but it has confirmed the idea we already had that there is no fresh source of supply in those districts of the Madras Presidency where the languages Tamil, Malayalam, Canarese and Tulu are spoken. There are some places in the Telugu Districts, in the Nizam's Dominions and in the Bombay Presidency where it would be possible to recruit labour without interfering with each other, but, probably, not without competing against other interests not represented on the U. P. A. S. I.

As far as I am aware, no determined effort has been made this year by the Planting Community of South India to tap fresh sources of labour; but, as Mr. Danvers gave no date for this, I presume we are all waiting as usual until some future time. For myself, all I can lay claim to is to have pointed out where it is impossible to seek for labour without cutting each other's throats. From past correspondence in the *Planters' Chronicle* you will find that, even in the best hands, new coolies from fresh sources of supply may possibly cost Rs.30 per head, and turn out a failure. We must be prepared for that. "Every time a cocoanut" is not to be expected.

Mr. DANVERS said that he regretted he had very little to say on this subject. Mr. Martin had taken the whole of the work upon his capable shoulders, and had done everything that it was possible to do. The maps that Mr. Martin had prepared had been compiled with a great deal of trouble and ability.

Mr. Danvers, reverting to the previous discussion, said that he would like to move the following Resolution, as they did not seem to getting any "forrader" in the amelioration of an unpleasant state of things:—

"That the delegates from the Kanan Devan and the Anamalais Associations be asked to form a Committee to consider the labour problem and the best means of meeting it, taking care to consider the various views and the conditions of different districts, with a view to reconciling, as far as possible, conflicting opinions."

He named the two Associations mentioned in the Resolutions, because their views were apparently diametrically opposed to each other, and he felt sure that if they could formulate a mutually satisfactory scheme, the other Associations would find little difficulty in falling into line.

Mr. ABBOTT (Wynaad) seconded the Resolution, which was carried unanimously.

Mr. KIRWAN (Bababudins) in opening this subject, said that he desired to make a reference to the Ceylon recruiting agencies all over the country. It had now started agencies all up the Southern Mahratta Railway. Speaking of Mysore generally, he said that it was not a very thickly-populated State, and already great difficulty existed in finding labour. Not only was this the case with planters, but it was also the case with Government, who found a difficulty in providing coolies to work on the roads. The class of coolies that had lately been advanced were petty cultivators, living within easy distance of the estates, where they worked for short periods between seed-time and harvest, when not engaged with the cultivation of their own lands. Many of these coolies were under heavy advances to estates, as they were generally regarded as local labour. Many of these coolies had been enticed away by these agencies to Ceylon. He did not know the actual number of coolies that had gone; but he felt sure that in a very little time they would feel the effect of this competition. There used to be two of these agencies, one at Chennapatna and the other at Holakere. The former had been closed, owing to representations made by Mr. F. M. Hamilton, but the Holakere Agency was within view of their very bungalows in his district. The bulk of the coolies for their estates came from this tract.

Certain representations had been made to the Mysore Government in the matter, and Mr. Kirwan read a letter from the Amildar of Tiptur detailing the hardships of a gang of coolies who had returned from Ceylon. They realised that Ceylon must try and get coolies, but they wanted to ask Ceylon that, considering this was the only source of their labour that they should withdraw from competing directly with. He trusted that Ceylon would realise in a friendly way that recruiting in Mysore was not playing the game, and that, on a representation made, they would withdraw these agencies. He, therefore, proposed the following Resolution :—

“ That this Association deprecates the action of the Ceylon Labour Commission in establishing cooly recruiting agencies in the vicinity of old-established estates, and trusts that all such agencies may be withdrawn.”

Mr. F. M. HAMILTON (S. Mysore) in seconding the Resolution, said that as regards the agency that was started at Tiptur, it was brought to his notice as Secretary of the South Mysore Association. He wrote to the Deputy Commissioner stating what he understood to be the facts of the case and asking him whether it was the wish of H. H. the Maharaja's Government that coolies should be taken in large numbers to Ceylon. He had nothing but a simple acknowledgment of the receipt of this letter. He heard afterwards that it was not through his letter, but because the Ceylon Labour Commissioner had heard that a man called Hamilton had made representations about the matter, believing evidently that it was the Planting Member of Council and the present Chairman. Mr. Farquharson, wrote to say that the agency would be withdrawn and it was withdrawn. At the same time he mentioned the Hollalkere Agency and said that if that was withdrawn they would lose considerably. As far as he (Mr. Hamilton) could make out, Mr. Farquharson seemed inclined to fight over the question whether that agency should or should not be withdrawn.

The CHAIRMAN.—I have only one correction to make on behalf of the office. No letter was received from Mr. Farquharson, but there was a conversation on the subject when Mr. Farquharson came here last month under a misapprehension that the Meeting would be held then.

[IN COMMITTEE].

Mr. KIRWAN read the letter from the Amildar regarding the treatment these coolies had received in Ceylon and the state in which they had returned to Mysore, and after some desultory discussion the Resolution was put and carried and was afterwards affirmed in Open Meeting.

[IN OPEN MEETING].

Enticement of Advanced Labour.

On the subject of enticing away advanced labour from estates for emigration, Mr. C. DICKINS (Shevaroy's) said :—

Mr. CHAIRMAN,—I received instructions from my Association to agitate on the subject now before the Meeting, with a view to stop crimping in planting Districts. It is being carried on at our very doors. Recruiters from Ceylon make Salem town their headquarters and from there establish Sub-Agencies in the surrounding villages of Salem on the hills, and on several occasions it has been brought to

the notice of our Association that recruiters have spent a couple of days in cooly lines on estates. It makes no difference to the head recruiter whether advanced or non-advanced labour is secured, or the method adopted by his Sub-Agents to attain this end. Absolutely almost every cooly on our hills has an advance from some estate or other in the district. Recruiters are aware of this fact. Still why are they found in places as aforesaid? Surely, they are not stationed there for the benefit of their health or to enjoy the cool climate or the views. This answer is easily solved when one fine morning it is discovered that several labourers from a gang have suddenly disappeared. This is a very unpleasant and unsatisfactory state of affairs, adding as it does additional trials to our industry. My Association, therefore, claims protection and help from Government and offers to suggest that a rule should be adopted to prevent recruiters from crimping advanced labourers in a planting District.

He therefore proposed that the U. P. A. S. I. ask the Government whether some rule might be adopted to prevent recruiters crimping in a planting District.

The Resolution was seconded by Mr. DANDISON.

Mr. MARTIN (Kanan Devan) opposed it in the following speech:—

Mr. CHAIRMAN,—Believing as I do that the labour difficulty we experience in South India is due entirely to the pressure from outside, this matter of enticement of labour to emigrate seems to me of the gravest importance. The Government of Madras will not help us. In considering ways and means to help ourselves, we must consider the type of planter we have to deal with. I have already "gone for" Ceylon over another question. I shall now proceed to have a tilt at the Straits. At the Eighth Annual Meeting of the Bakit Raja Rubber Company, the Chairman, after pointing out that the tendency of wages was to increase, proceeded to say:—"During the past year we imported 800 coolies from India, but, owing to the unscrupulous crimping methods to which, I regret to say, some estate Managers in the Federated Malay States lend themselves, we have actually fewer coolies on the property than we had a year ago," and he hopes that the authorities, will check this reprehensible practice. Compared with this, we simply do not know what crimping means in South India! If any of you gentlemen had collected, say, even 100 coolies from fresh sources of supply, and found a larger number than that crimped off your estate, so that you were worse off than before, I can imagine that the correspondence columns of the *Planters' Chronicle* would swell considerably. The enormity of the offence of crimping from each other in the Straits seems to be recognised there, but I must confess I look upon it with equanimity, for after having crimped our coolies, if others crimp theirs, "serve them jolly well right" I say. In this matter it is plain we have to deal with men fighting for their own individual hands alone, and how to combat them is a difficult question. You all know I have always been a strenuous opponent of legislation which tends to interfere in the relations which I consider should exist between employers and employees. But even up to last year I was of opinion that there should be legislation as regards emigration. I still think that where coolies from India are unjustly treated, in British Colonies or in other countries, the Government should step in and see that fair dealing is meted out to them or that promises made or implied are kept. But beyond this, legislation to favour us as against our competitors I think undesirable. If what I have said or done in

the past proves that I ever thought otherwise, I now disavow it. I believe the proper way to get coolies, and to keep them, and to prevent their enticement by emigration agents, or others, is to see that our own conditions are good enough to attain those objects, and to let this fact be widely known.

If any estate, or group of estates, or District, fails to attract coolies sufficiently, then that estate, or group, or District, deserves to fail altogether, and, gentlemen, so much the better for the community as a whole. It is very hard on the individuals concerned, no doubt, but it is a law of nature that the individual must suffer for the good of the community, and no law of the Universe can be controlled by human legislation. If all the brains and time that have been hitherto taken up by working out legislative problems for our supposed benefit had been occupied, instead, in devising means for increasing the attractions offered by ourselves to our own coolies, we would now, as a community, be better off with regard to labour than we find ourselves to be. I am, therefore, opposed to Mr. Dickins' proposal, as he wants us to go to Government for rules on the subject.

Mr. DANDISON.—I can only understand that Mr. Martin advocates raising wages all round to keep Ceylon and the Straits at bay. I can't think of any other inducement.

The CHAIRMAN said that he would like to point out that the Resolution was rather vague. If a request of this sort was sent to Government, they would say that it was the planters' business to make definite proposals and not ask them to make rules to suit the planters' needs.

[IN COMMITTEE].

Mr. BARBER.—Could Mr. Martin suggest any alternative Resolution to stop recruiting in planting districts?

Mr. F. M. HAMILTON.—I should have thought this was covered by the previous Resolution.

Mr. P. G. TIPPING.—This applies to advanced labour.

Mr. MARTIN.—I think I have suggested an alternative scheme. When Mr. Dandison said he understood me to mean a general rise in wages, he made a mistake. I mean nothing of the sort. The Chairman has made a suggestion which is a good one for some districts I have no doubt.

Mr. ABBOTT suggested that it might be possible to bring forward an amendment to Mr. Dickins' Resolution which might meet Mr. Martin's objections and make them unanimous. He, therefore, proposed:—

“That the attention of the Ceylon Labour Commissioner be called to the fact that his Agents are actually trying to crimp advanced coolies on the estates in our districts, and that we record an opinion that such action is certainly dishonest and probably illegal.”

This was seconded by Mr. E. F. Barber and carried.

Mr. Dickins' Resolution was, therefore, lost.

The Meeting at this stage adjourned.

When business was resumed in the afternoon, the last of the Labour subjects was taken up.

Non-service of Warrants.

Mr. DOWNING (Nilgiris), in opening this subject, said :—

This matter was brought forward at one of our Meetings, and on its being placed before the D. S. P., Nilgiris, who was present, he thought that if entries were made in a register kept for the purpose, and against each warrant not served was entered the reason for non-service, that would help matters, for a record would be available for scrutiny by the higher officials of the Police Department, and the Constable, knowing this, would take more care that warrants were served if really possible to get hold of the right person.

“One very flagrant case occurred to a member in our District, who reported that he warranted a man on the West Coast (in British India); this warrant was returned, endorsed “Not known.” He went on to say that this man was well known on the Coast, and in fact he had received a letter from him after the issue and return of the warrant, on paper stamped with his name and address. Now if a man of his position could not be got at, how was the ordinary cooly to be warranted, unless the Government put more pressure to bear on the Constable, through the higher officials of the Police Department?

“I know that the Constable has been clever enough to find out that a cooly can abscond to certain Native States, and so be in a position to laugh at him, but I do not think, and Mr. Barber will, I am sure, bear me out, when I say that nothing like the number of coolies who are said to have ‘gone to Cochin,’ etc., have really done so, but that the majority of them are on more profitable business bent, the Constable in the meantime acting the part of vampire.

“We are, I am sure, very grateful for what has already been done by District Officials to help us in the matter, and trust they will continue to do all in their power to help matters forward. I, therefore, beg to propose that this Association again calls attention to the non-execution of warrants issued under Act XIII of 1859 and Act I of 1903, and that while thanking the Governments of Madras and Mysore for what they have already done, records its opinion that little improvement has as yet occurred and would ask them to take further action in the matter, especially with reference to the suggestion of the D.S.P. of the Nilgiris, that a register be established for recording the history of all warrants.”

Mr. ABBOTT (Wynaad), in seconding the Resolution, said :—“I have much pleasure in seconding, Mr. Chairman, Mr. Downing’s proposal. The subject of non-service of warrants has been regularly before these Meetings for some years; we have passed several Resolutions asking Government to make the Police do their duty. Last year we asked to have the Police force increased in the districts in which labour is largely recruited for plantations, and I believe the force is to be increased in Coimbatore. As far as I can make out, there is no improvement. I was instructed to bring forward the question as strongly as possible. The grievance is one really felt in Wynaad, and it is evident from the correspondence I have had with other Associations that the complaint is general. From what some of my own members write there is a feeling growing that it is no use going into Court; and that taking out warrants is waste of time. And the case of our maistries is rather worse.

"One used to assume if warrants were not served it must be because the Police were bribed. There seem occasionally to be such cases. One of my members wrote to me about what appears a very glaring instance. A warrant has been out for twelve months against a well-known native in Trichinopoly. He is a large property owner and cultivator; it is quite inconceivable that the Police should not have been able to serve the warrant, yet the complainant is being pressed to withdraw the case, on the ground that the warrant had been received back with the usual endorsement that 'the defendant cannot be found.' The Police authorities ought to enquire into a case like this. But speaking generally I do not think there is any ground for attributing general corruption. To put it on the lowest grounds, is it likely that the class of men these warrants are taken out against could afford to keep on bribing the Police? But there undoubtedly is a great deal of slackness; and, apparently, a disinclination to take any trouble even in British territory, and it is the business of the heads of the Police to find a remedy. If our case goes up to Government we shall probably be asked for a clear proof of there being any reason to complain, which I will try to give. The only districts from which statistics on this subject are published are the Nilgiris and Wynaad.

"The figures given in the Collector's Reports show a bad enough state of things, but they do not reveal the whole. At the beginning of the year 1910-11, there were 947 cases not disposed of; there were 1,519 new cases brought; there were 1,398 cases disposed of in the course of the year, and 1,068 left undisposed of at the end of it. But we have to remember that of the 1,398 cases 'disposed of,' a great number of cases in which no arrest has been made and which are disposed of by being put on the 'special register.' That means that they disappear from the Magistrate's file of pending cases. In the unlikely event of an arrest being effected they can be re-opened. When a warrant has been returned once or twice, the Magistrates are naturally anxious to get the case out of the way, so as not to be called on to explain why they have so many cases undisposed of. I asked for information as to how many cases have been put on the special register, but could not get it in time.

"I sent out a circular to members of the Wynaad Association, asking for the number of cases they or their maistries had taken out against defaulters and have their replies with me. I am particularly obliged to Mr. Wapshare, of the Ouchterloney Valley, who has sent me very full details from all his Superintendents. Some of my members were new to the districts and unable to furnish details; but I may summarise the matter by saying that out of 155 warrants, 108 were returned unserved. Of course, these details are obviously incomplete, except in the Ouchterloney Valley, and even there some Superintendents make a note that several maistries are in their country, so no particulars are available. In other cases I have only been sent details of warrants taken out by planters, a very small proportion of the total. But taking the figures as typical, we may say that two-thirds of the warrants issued are not served. The very figures in the Collector's Reports furnish one reason. From two not very large Districts the Police have had to deal with 2,400 cases in one year. One definite suggestion has been made to me, which is that the system of 'hand warrants' which has been suspended in the Nilgiris ought to be renewed. That came through a Nilgiri member of the Wynaad Association. In Wynaad we are allowed

to have 'hand warrants.' This means that the complainant is given the warrant to take to the defendant's village and to point him out to the local Police, and I believe that this privilege is usually allowed in other Districts. Another suggestion is that if the defendant is not arrested he ought to be "proclaimed." That means that his goods are to be confiscated. There is an old saying about the penniless traveller whistling as he meets the thief; in this case it is the thief who does the whistling. After all, if we prove that there is a defect in the administration of the law it is the business of the administrators to find a remedy; so I will leave it at that, and second the Resolution.

Mr. BARBER (Nilgiris).—Might I say that with regard to hand warrants, it seems impossible that any blame can attach to the Police for the non-execution of hand warrants? That is the rather strong point in Mr. Francis' argument. If we ask for the Police to be hauled over the coals for slowness, he says, how can they act; they have never seen the warrants.

[IN COMMITTEE.]

Mr. P. G. TIPPING (Coorg).—Would Mr. Downing and Mr. Abbott object to Mysore being included in the Resolution? Many of our warrants are not executed in the Mysore Province.

Mr. CHAIRMAN.—If I remember rightly, last year the Mysore Government promised to introduce improvements. Have you any reason to think that this has not been done?

Mr. TIPPING.—I have no information at all. We were asked by our Association to support this Resolution. I don't think that there has been any improvement.

Mr. ABBOTT.—I have no objection to including Mysore.

Mr. BARBER.—If we give effect to the District Superintendent's suggestion of starting a register of these warrants, can we use hand warrants?

Mr. ABBOTT.—It was merely brought forward as a suggestion in a letter from a member of our Association. I can quite see the objection as to hand warrants. There is nothing in the Resolution about hand warrants?

Mr. P. G. TIPPING.—I don't know whether the Government of Mysore has done anything; but when we thank the Government of Madras for what has been done, the Government of Mysore might be included as a matter of courtesy.

This was agreed to, and the Resolution thus verbally amended was carried in Committee and confirmed in Open Meeting.

Finance.

The Meeting then proceeded as a private Committee to consider the subject of finance.

Subsequently, the delegates went into Committee and discussed the details of Mr. Aylmer Martin's scheme for the advertisement of Labour prospects in Planting Districts in South India.

Fifth Day, Friday, September 1st, 1911.

On meeting to-day at 11 A.M., Mr. Martin's scheme was the first business taken up.

Mr. MARTIN moved the following Resolution :

"That the U. P. A. S. I. get printed as many circulars as may be required by the daughter Associations for broadcast circulation among the villages of South India."

The Resolution was seconded by Mr. C. E. ABBOTT and was carried unanimously.

[IN COMMITTEE].

In Committee Mr. Martin made some suggestions regarding the drafting and printing of the circulars. He proposed to get the advertisement that he had read the previous day drawn up and submit it within a week to the Secretary of the U. P. A. S. I. to distribute it to the Councillors of the Association, who could return them to him direct. He would boil them all down and make one advertisement of it, and would then send it to the Chairman of the U. P. A. S. I., who might finally decide whether it was good enough or not. If it was good enough the printing could go forward. He did not know whether in Bangalore there were facilities for getting it printed in the various vernaculars; if there were they could be printed in Bangalore. If not, he could get them done in Madras. There should be an appropriation from U. P. A. S. I. funds to pay for these charges. Subsequently the copies required by each Association could be paid for by the Association concerned for the particular copies they required.

The CHAIRMAN.—I think that we may take it that these are the instructions of this Meeting for the next year.

"The Planters' Chronicle."

Mr. ANSTEAD (in the absence of Mr. Plowden, of the Malabar Coast Planters' Association) said that Mr. Plowden's suggestion to him was that since he (Mr. Anstead) had been out he had written about 60 or 70 papers which had appeared in the *Chronicle*. If a member wanted to consult any particular paper, he would have to turn up the file of the *Chronicle*, which was not always convenient. Mr. Plowden suggested that these papers should be grouped together under certain subject heads and republished as a bulletin of the U. P. A. S. I. For instance Mr. Plowden pointed out that information with regard to Pink disease, which was of interest to rubber planters was scattered over three different papers that were published at three different times in the course of two years. It would certainly be of great use if these papers could be collected and grouped together and published as a Bulletin.

Mr. ABBOTT said that he might add to what Mr. Anstead had said that Mr. Plowden's idea was that it would pay them to do this. His idea was to make a profit out of the Bulletin. Those interested in rubber estates would gladly pay for the Bulletin on Pink disease.

Mr. ABBOTT.—May I ask Mr. Anstead if he has any definite idea as to what he will publish in the first Bulletin?

Mr. ANSTEAD.—This idea, I may say, is quite an old one between the Secretary and myself. We have talked it over, but we have never worked out a plan. There should be various subjects, five or six at the least, that could be got out. I am here to hear your wishes on the subject. I am quite prepared to do the work, but I want your instructions. There is just one point, I think that we must be quite clear upon. There is a little technical difficulty in the way. The papers have been published in the *Planters' Chronicle*, which is not exactly owned by the U. P. A. S. I. Now if you propose to cull these papers back from the *Chronicle* and republish them as Bulletins for sale, it is a matter for the Secretary, the Editor of the *Chronicle*, to decide whether he would let you. Is the money to go to the *Planters' Chronicle* or to the U. P. A. S. I.?

Mr. F. M. HAMILTON suggested that the Editor might bear the expenses of republishing them and the sale proceeds might go to him. It would keep the U. P. A. S. I. accounts clear.

The CHAIRMAN.—Now we are going on to discuss the financial part of the matter. Does Mr. Hamilton's proposal meet with your approval?

Mr. ABBOTT.—Does it meet with the Editor's approval?

The CHAIRMAN.—If it does not meet with your approval there is no need to put it to him. I dare say that he would agree if we pressed him.

Mr. ORMEROD said that he was quite willing that this work should be done, but it should be understood that mere re-publication would not be enough. He thought he would have to ask Mr. Anstead to undertake the duty of bringing the articles up-to-date.

Mr. ANSTEAD said that he was prepared to do that.

Mr. F. M. HAMILTON suggested that it might be difficult for the Scientific Expert to add to his duties by doing the work of editing the papers.

Mr. ANSTEAD.—I do it now, there is no way out of it, I am perfectly willing to do it. Of course, it is understood that I hold the copyright for these papers under the Copyright Law.

Mr. DANVERS.—My idea was that the Editor and Mr. Anstead might collaborate and share the profits.

Mr. ANSTEAD.—The Editor wants to know if I would share the losses. I say, No.

It was decided that Bulletins should be published from time to time.

[IN OPEN MEETING].

Mr. DICKINS (Shevarovs) said my Association would like to see the circulation of the *Planters' Chronicle* confined strictly to District Association members, and we consider that to attain this end it is absolutely necessary that a revised list of all members of District Associations should be kept at the U. P. A. S. I. office. This would involve a little trouble to Secretaries of District Associations, but doubtless it would rectify the error. We would also venture to suggest that the present value of the *Planters' Chronicle* be raised from its ridiculously low price of 4 annas per copy to a higher figure. If the above measure were adopted, it would considerably help to

lessen the feeling of discontent prevalent amongst some members of District Associations. So I beg to propose the following Resolution :—

“ That the Honorary Secretaries of District Associations furnish a complete list of subscribers to this Association at an early date, also that information should be sent to the Secretary when a member resigns or leaves the District with a view to stopping to a great extent the free circulation of the *Planters' Chronicle*, and that the subscription to the paper be raised.

Mr. DANDISON (Nilgiris) seconded the Resolution. He said :—“ I should like to say, we certainly think the price of the *Planters' Chronicle* should be very materially raised to outsiders. It is a most valuable little periodical, containing papers on all subjects by our Planting Expert, and also results of experiments, but all these details are now available to any outsider, planter or otherwise, at the nominal figure of 4 annas per copy. If such information as our paper contains is desired, it should be paid for at market prices. Surely it is worth more than the sum now charged. It is not from any selfish motive, to withhold, or charge highly for, any information that would be of general interest, but to get at the man who can afford to join local Associations or subscribe to the Scientific Officer's Fund, but will not. It is this class of man in the main that prevents us from being what we ought to be, a really United Planters' Association. He resembles the hyena in that he prefers to pick up his living with the least possible amount of physical energy, hoping to deceive others into thinking he is really an excellent fellow, by a great expenditure of vocal energy. While quite sympathising and fully agreeing with all Mr. Danvers said on Tuesday regarding the publishing of all information on scientific results to non-subscribers, I still think that there are exceptional circumstances that make this course inadvisable. As regards the question of supplying the *Planters' Chronicle* free to all who subscribe to the Scientific Officer's Fund, and who are not members of an Association, we think that payment should be made.”

[IN COMMITTEE].

Mr. BARBER.—Can Mr. Ormerod tell us how far the *Chronicle* is appreciated by planters who do not subscribe to their Associations?

Mr. ORMEROD.—I can scarcely answer that, but Mr. Dickins tells me that planters on the Shevaroy who are non-subscribers are still receiving free copies. I cannot have been informed by the Honorary Secretary that these gentlemen have ceased to be members of the local Association.

If you are going further into the question of subscription, I should like you to fix a definite rate of subscription. I am not fond of selling single copies. I may add that even now I get many copies back through the post, not delivered, because men have gone home, left the District, or died. I have the pleasure of paying the postage on all these copies.

Mr. DANVERS said that with reference to Mr. Dandison's proposition, it was difficult not to be altruistic. He had no desire to be altruistic except under compulsion. If they had a public that liked the *Planters' Chronicle* and the Scientific Officer's papers, they should not hide their light under a bushel. Those who wanted the paper would get it somehow or another. They were being altruistic under compulsion.

Mr. DANVERS (to the Secretary).—Can you tell me how many copies go abroad?

Mr. ORMEROD.—A great many go abroad. The paper goes to the West Indies, Australia, America and pretty nearly all parts of the world.

Mr. ABBOTT.—I got an answer to an advertisement for tea seed from London.

Mr. ORMEROD.—One man got a reference to something that appeared in the *Chronicle* from Constantinople.

The CHAIRMAN.—I was sent a copy of a paper from Paris containing comments on some wild speech I made on Import Tariffs.

Mr. ANSTEAD.—The paper gets a wide circulation. I have been working on the other side attached to various departments. I wrote when I came here to all of them and said: "We have a scientific publication, if we arrange to send it to you; will you send me yours?" And they are very glad to do it.

The CHAIRMAN.—This discussion is proceeding under two heads. The first, I take it, meets with no opposition, namely, that Honorary Secretaries should furnish proper lists of members, so as to stop the free issue of the *Chronicle*. Let us confine our discussion to the point whether the price is to be raised.

The Editor would prefer that you should fix a definite rate.

Mr. F. M. HAMILTON proposed as an Amendment:

"That the subscription to the *Planters' Chronicle* be fixed at 8 annas per copy or Rs.20 per annum."

This was seconded by Mr. Danvers and carried.

The Resolution as amended then read as follows:—

"That Honorary Secretaries of District Associations furnish a revised complete list of subscribers to the Association at an early date; also that information should be sent on to the Office when a member resigns or leaves the district with a view to stopping to a great extent the free circulation of the *Planters' Chronicle*, and that the price of the paper be raised to 8 annas or more per single copy or an annual subscription of at least Rs.20 for all outside Associations and the public.

The CHAIRMAN.—The next question is, are non-members of District Associations who have subscribed to the Scientific Officer Fund to have the *Chronicle* supplied free or not?

Mr. KIRWAN.—Are they members of the U. P. A. S. I. if they don't belong to their District Associations?

The CHAIRMAN.—No.

Mr. BARBER.—Is this not covered by the previous Resolution?

The CHAIRMAN.—I think it is, but we must have a definite ruling.

Mr. ABBOTT.—You are only asking for trouble.

Mr. DANVERS.—I think the question is very complicated and not so simple as it looks. On the one hand these gentlemen don't belong to the local Associations and don't have any connection with the U. P. A. S. I. or interest in the *Chronicle*. On the other hand they are subscribers to the Scientific Officer Fund, and from that point of view they have a right to whatever information that officer has to give them.

The CHAIRMAN.—The point on which I want a Resolution is whether they should be furnished.

Mr. DANVERS.—I think they should pay a higher rate, as they are not members of the U. P. A. S. I.

Mr. F. M. HAMILTON proposed, and Mr. Danvers seconded the following Resolution:—

“That this Meeting is of opinion that gentlemen who are not members of a District Association are not entitled to copies of the *Planters' Chronicle* free.

Mr. KIRWAN.—May I ask what the present rule is regarding furnishing free copies of the *Chronicle*.

The CHAIRMAN.—It is issued free to members of District Associations.

[IN COMMITTEE].

Mr. KIRWAN.—I was going to say that if they are not entitled to it now, is there any use saying that for the future they will not be entitled to it?

The CHAIRMAN.—The point has been raised, and this Meeting must decide it.

Mr. ABBOTT thought that subscribers to the Scientific Officer Fund ought to have some consideration. It saved Mr. Anstead a lot of trouble to be able to publish his information in the *Chronicle*; but a subscriber to the fund who did not get the *Chronicle* would be entitled by right to demand the information which was in the *Chronicle*, and that would give an infinity of trouble.

The Resolution was put to the Meeting and carried. It was afterwards confirmed in Open Meeting.

[IN OPEN MEETING].

In connection with the same subject Mr. DANDISON (Nilgiris) made the following statement:—I would like to draw attention to a Resolution passed at the Nilgiri Planters' Association Meeting held on the 29th May, with regard to subscriptions not being paid in spite of all endeavours of our Honorary Secretary to collect them. Mr. L. L. Porter, the Honorary Secretary in question, brought this matter up, and in order to strengthen his position, we passed the following Resolution:—“That the *Planters' Chronicle* be stopped and no vote allowed to any defaulting member until all arrears are paid and that three months' grace be allowed from the date on which the subscription is due.” The reason for this Resolution was that the Honorary Secretary reported that a certain member on being requested to pay up long arrears of subscription, refused to do so, and calmly wrote that he would like his name removed. All this time he had been

receiving the *Planters' Chronicle* and enjoying all the benefits it undoubtedly gives. Of course this situation may never occur again, but as things stand at present Honorary Secretaries are placed in a very difficult position, should it do so. A certain sum of money, "Subscriptions due," is carried over as an asset and when every effort to collect this is futile, it has to be written off; a contingency that might place an Association in a very awkward predicament. For the sake of argument, having guaranteed, say, a sum of money to a certain object on the strength of a good balance on paper, an Association might find itself unable to give this amount without a further call for funds, owing to certain members refusing to pay. On the Nilgiris we have a definite understanding that all subscriptions are to be paid in advance and our idea is that the Honorary Secretary in future advise the Secretary of the U. P. A. S. I. to stop the *Chronicle* to any member who has not paid his subscription after the first reminder, but he would be very pleased to hear any suggestions that would tend to the prevention of a repetition of complaints such as Mr. Porter had to make.

[IN COMMITTEE.]

Mr. ABBOTT.—I would like to suggest to the Editor of the *Chronicle* that he should publish all District Association Meetings in the *Chronicle*, whether they were reported in the Press or not. On the Nilgiris they held Meetings on two occasions which were not reported in the *Chronicle*, and I believe that the same thing occurred in connection with Kanan Devan. The result is that people who take an interest in what other Associations are doing, whether on a particular subject they are in agreement with you or the reverse, are kept in the dark.

Mr. ORMEROD said that there was no intentional omission of the Nilgiri Associations' Report. The Honorary Secretary at a very busy time sent him a rough proof taken from some paper. He put it on one side because he had as much to do as he could possibly manage, and he forgot about it. Subsequently he was sent another copy of a rough proof, on which he had to make 50 or 60 corrections. He wrote and remonstrated and said that that was not a reasonable way in which to send Proceedings for publication.

As regards publishing the Proceedings of all District Meetings, he had no objection provided that they were all sent to him direct. He could not be expected to follow them up in other papers.

[IN OPEN MEETING.]

The CHAIRMAN.—The Editor has pointed out to me that he gets very little local information from Districts. I would like to ask Honorary Secretaries and Chairmen of local Associations to send in to the Editor of the *Chronicle* such general information as they can give with regard to prospects, conditions of estates and general weather, conditions, &c., that will enable him to write articles that will be of general interest.

Assistant Scientific Officer.

The CHAIRMAN.—I should like to ask a member of a Mysore Association to propose a definite Resolution authorising the U. P. A. S. I. to get an Assistant Scientific Officer.

Mr. DANVERS (N. Mysore) proposed; and Mr. F. M. Hamilton (S. Mysore) seconded the following Resolution :—

“ That the U. P. A. S. I. be asked to receive the contributions of the United Mysore Associations, *viz.*, North and South Mysore and the Bababudins, to be disbursed on behalf of those Associations on account of the proposed Scientific Officer, and that on receipt of suitable guarantees the Chairman and the Scientific Officer be and are hereby empowered to secure the services of such an Assistant.”

Mr. ANSTEAD said that he was quite prepared to take his share of the responsibility in selecting and engaging such an Officer. He required, however, some definite statement as to the qualifications of the man required. They were offering a fair but not a large salary, and that to a certain extent would be the measure of the man they wanted. He would have to be something of a Mycologist, an Agricultural Chemist and a Botanist. They would have to decide also as to whether he was to have a Diploma or not. As a matter of fact, anticipating in a certain degree the good sense of the Mysore Association, he had put matters in train for the selection of a man, and his selection only now depended on the precise qualifications the subscribing Associations wanted.

Mr. F. M. HAMILTON said that the view of the S. Mysore Association was that the Assistant appointed should not necessarily have a degree; in fact they could not expect a man with a degree to come for the salary. He must, however, be a man who could take up the work of hybridisation, he must know something about Botany, have a good working knowledge of Mycology and a certain amount of Agricultural Chemistry. The only other point for consideration was whether they should not insist upon the man learning the language in a fixed time.

[IN COMMITTEE].

Mr. DANVERS said that with regard to what Mr. Anstead had said, he thought they could leave the qualifications to be settled by Mr. Anstead. He was perfectly certain that he would not engage an inferior man. He was not prepared to insist upon a Diploma, but with regard to the language question he thought it was advisable that the man should be expected to learn the language within a certain time.

Mr. KIRWAN (Bababudins) agreed with Mr. Danvers.

Mr. ANSTEAD said that with regard to language he felt very strongly on the point. The Government had insisted upon his learning the Vernacular. He had tried to scrape out of it but the Government had insisted and the thing had to be done at an enormous waste of time. He did not want them to pick their man on the same understanding, namely, insisting that he must learn the language within a certain time, or they would get rid of him. It would be far better to get a man on probation—Government did the same thing with its Scientific Department appointments—say for three years, and if at the end of that time he was not satisfactory, they might get rid of him.

Mr. DANVERS.—By what he said he meant that he hoped that the Assistant would learn the language, but they would not insist upon it. At the same time the difference between an Assistant and General Manager was that the latter was dealing only with Europeans and

would not possibly require to have a knowledge of the Vernaculars, whereas an Assistant in his work must come into constant contact with the coolies and it would be an advantage to know the Vernacular.

Mr. ANSTEAD.—As long as you don't insist, I will undertake to impress upon him the necessity for learning the language.

Mr. DANVERS.—We don't insist, we only hope that he will pick up the language.

Mr. BALL.—Might not the point be settled between the Associations concerned?

The CHAIRMAN.—It is considered desirable to have a public discussion in order that the Association might have a line to go upon.

The CHAIRMAN.—We then require instructions as to the date on which the Assistant is to commence work. Are we to take it that he will commence with the calendar year 1st January, 1912?

The delegates from the Mysore Association said that that would meet their view.

The CHAIRMAN put the Resolution, which was carried in Committee and confirmed in Open Meeting.

[IN OPEN MEETING].

Rules.

In connection with the Rules of the Association, the following Resolution was proposed by Mr. C. Danvers and seconded by Mr. E. Barber:—"That as, in the opinion of this Association, the long intervals between the Meetings of the U. P. A. S. I. result in loss of interest in and knowledge of current subjects and with a view to expediting the transaction of business of importance it is desirable that half-yearly Meetings should be held."

Mr. ANSTEAD in the following speech proposed an alternative scheme:— I think that the Resolution before the Meeting will not find favour with the Delegates, and that it is likely to be rejected. Though not feasible, the idea embodied in the Resolution is a good one, and I have long felt that we do not get together often enough. I beg therefore to propose the following Amendment:—

"That Meetings of the United Planters' Association of Southern India be held annually as heretofore, but

- (1) That at least three subsidiary Sectional Meetings at convenient centres be held in addition each year to deal mainly with coffee, tea and rubber, respectively.
- (2) That these Sectional Meetings devote special attention to the purely agricultural aspect of the planting industries by means of lectures, exhibitions and discussions.
- (3) That all Resolutions passed at these Sectional Meetings shall be forwarded to the U. P. A. S. I., to be reconsidered at the next Annual Meeting of that body, and that such Resolutions shall not become in any way binding upon the U. P. A. S. I., unless re-affirmed at an Annual Meeting.
- "(4) That the Secretary of the U. P. A. S. I. be hereby empowered and instructed to approach the Honorary Secretaries of the District Planters' Associations with a view to making the

necessary arrangements for holding such Sectional Meetings during the ensuing year, and in future years; that he shall attend all such Meetings, if possible; and that a travelling allowance shall be granted to him for this purpose, of a double first-class railway fare and Rs.5 halting allowance."

In proposing this amendment, I would point out that at the Annual Meetings of the U. P. A. S. I. it is seldom that more than two delegates from each district are present, often only one, and there are so many subjects of a business-like nature that must perforce be discussed that agricultural matters pure and simple are apt to be crowded out. Could we have Sectional Meetings, such as I propose, both these difficulties would be got over. In the first place, if the time of year at which the Meeting was held, and the place, were carefully considered, it should be an easy matter to get a number of men together all interested in the same subject, and there would be little need to discuss planting politics, and agriculture could assume the foremost place. I would suggest, for instance, that a Meeting be held at a centre like Hassan at which those more directly interested in coffee and Ceará rubber would attend from Mysore and Coorg, while the tea districts would probably not be interested, and it would not much matter if they were unable to send delegates, since little but Coffee and Ceará would be discussed, together with business matters relating more particularly to Mysore and Coorg. The same would apply to a Meeting at a centre in the Tea districts, and another in the Hevea rubber districts. At these latter Tea and Hevea, respectively, would be the chief items on the agenda paper.

I think that we are all agreed that it is a good thing, and a progressive thing, to get together occasionally and exchange experiences and discuss mutual difficulties. Sectional Meetings would afford, too, excellent opportunities for discussing and thrashing out proposals referred back to the District Associations at the Annual Meetings, and conclusions would be more likely to be arrived at than under the present system, since at Sectional Meetings more than one district would be represented, and represented by free agents, instead of delegates necessarily more or less tied down by the instructions they have been given by their Associations. Thus it seems to me that not only would progress be made by discussing agricultural matters, but time would be saved, and business more expeditiously done, at the Annual Meetings, because delegates would come here with proposals which had already been to a great extent thrashed out and agreed upon at the Sectional Meetings.

With regard to the last paragraph of my amendment, I need say little. I take it that we are all agreed that the presence of our able Secretary is necessary at such Meetings if they are to be a success, his presence, indeed, will go far to ensuring their success. My amendment is seconded by Mr. Playfair, the delegate for South Mysore, and I hope that it will find support amongst the other delegates present.

The Amendment was seconded by Mr. Playfair (South Mysore).

Mr. DANVERS said that Mr. Anstead's amendment was theoretically perfect, but practically there were many difficulties in the way. He had suggested that a Meeting might be held at Hassan for Mysore and Coorg to meet together and discuss matters. As a matter of fact, it would be infinitely easier to hold such a Meeting in Bangalore. It would be very much easier for men in Kadur and Coorg to come to Bangalore than to go to Hassan. And when they

got to Hassan, he did not know where they could all put up. Meetings were certainly held in the District, but all Meetings entailed a certain amount of trouble and expense. He was not competent to speak for rubber or tea, but he did think that Mr. Anstead's scheme involved physical difficulties that would make it impossible. He did not want to throw cold water, but it would certainly be possible for these Sectional Meetings to be held more conveniently in Bangalore.

Mr. MARTIN said that when the original proposal was made he thought why should they always meet at Bangalore, but when he passed in review the other places where it was possible to hold such Meetings, he came to the conclusion that except in Bangalore the difficulties would be insurmountable. If they came to his District, he did not know what they would do for accommodation. They had camps of exercise, it was true, but it was under canvas, and the men could never be away for more than three or four days at a time. It seemed to him that the proposition though very nice was impracticable.

Mr. COOK agreed with Mr. Martin. He did not think that it was possible in his District to make the necessary arrangements for the accommodation. He thought it would be better to have Mr. Danvers' proposal of two Meetings a year in Bangalore.

Mr. ANSTEAD, in reply to Mr. Danvers, said that he had used the word "Hassan" in the same way as Mr. Danvers had used the word "Travancore" on the labour discussion; that is, as a general term. Personally he was not wedded to the idea of holding the Meetings at Hassan. He did not care where the Meetings were held, as long as they were held. In reply to Mr. Martin, he did not agree with him in the least. If it were a race meeting or a dance, the difficulty would not be raised. When he was travelling through the Districts, he held many Meetings at which there had been 40 men. He did not know where they all slept. They slept somewhere. No difficulties were raised. It was simply announced that a Meeting was to be held, and the men came in. It simply amounted to this: if they wanted to do a thing, it was easy enough to do it; if they did not want to do, it was equally easy to put difficulties in the way. Mr. Cook had said that it was quite impossible to hold a Meeting in his District. Well he had been in Quilon and had held big Meetings there, and he thought that Quilon could put up 15 or 16 people easily. He did not think these practical difficulties were so insurmountable as it was sought to be made out. However, he did not wish to force their hands; he had merely put forward his amendment as a suggestion.

On the motion of the Chairman it was resolved:—

Rule V.—That for "Vice-Chairman" the word "Vice-Chairmen" be substituted.

That the following be added to Rule V:—"That the Scientific Officer shall be permitted to move Resolutions at Meetings, but shall have no vote."

Rule VI.—That for "Vice-Chairman" the words "two Vice-Chairmen" be substituted.

That the following be added to Rule VI:—"That should a vacancy occur in either of the appointments of Vice-Chairman during any financial year at any time greater than one month from the expiry thereof, the Council shall elect one of their number to fill such vacancy."—Carried.

Disbursements.

	RS.	A.	P.
Office	2,700	0	0
C. and P.M.'s T/A	150	0	0
Reporter's fee	250	0	0
Audit fee	75	0	0
Subscriptions to L. C. of C.	160	0	0
Secretary	3,000	0	0
Periodicals	300	0	0
Office Establishment and Furniture	1,000	0	0
Sectional Meetings	100	0	0
Bonus to Secretary	1,200	0	0
		8,935	0 0

The following Resolutions were adopted :—

Moved by Mr. E. F. Barber, seconded by Mr. John B. Cook :

"That in view of the Association's financial position the Secretary be asked to circularize Honorary Secretaries pointing out the urgent need for funds in order to enable the work of the U. P. A. S. I. to be carried on properly, and requesting those Districts that are able to do so and have not joined the Scientific Officer's Assistants Fund to pay a subscription at 2 annas per acre to cover all expenses."

Moved by Mr. E. F. Barber, seconded by Mr. J. B. Cook :

"That the Secretary and he is hereby, authorised to utilise temporarily for general expenditure a portion of the Reserve Fund, not exceeding Rs.1,000, any moneys so used to be replaced in the Reserve Fund and invested in fixed deposit as soon as this can be done with safety."

Moved by Mr. Aylmer Ff. Martin, seconded by Mr. C. E. Abbott :

"That Mr. W. H. Haldwell be appointed Auditor for the current year."

Moved by Mr. E. J. Barber, seconded by Mr. J. B. Cook :

"That an appropriation be temporarily be made from the Reserve Fund to meet any expenses in connection with the advertisement scheme, to be subsequently recovered from District Associations purchasing the advertisement circulars."

Moved by Mr. F. M. Hamilton, seconded by Mr. Ball :

"That Mr. Anstead be instructed to attend the Dasara Exhibition in Mysore and that Rs.200 be taken out of the available Rubber Exhibition Fund and applied to the expenditure incidental to the showing of exhibits sent in from the U. P. A. S. I. Exhibition."

Election of Office-Bearers.

Moved by Mr. F. M. Hamilton, seconded by Mr. Ball :

The ballot for the election of officers for the coming year resulted in the return of Mr. C. E. Abbott as Chairman, and Messrs. F. E. Barber and C. Danvers as Vice-Chairmen.

Mr. C. DANVERS stated that for various reasons he would be unable to act. Accordingly, Mr. Aylmer Martin, the next on the voting

list, was appointed Junior Vice-Chairman, and the list of Office-bearers for 1911-12 then stood as follows:—

Chairman	...	Mr. C. E. Abbott.
Vice-Chairmen	...	{ " E. F. Barber.
		{ " Aylmer Ff. Martin.
Secretary	...	" Mr. Ormerod.

Mr. C. E. ABBOTT said that he was much obliged to the delegates to the United Association for the honour they had done him in electing him Chairman for the second time. It was more particularly gratifying to him for reasons that those who were in the preliminary Committee last year would understand, and to which he would not now refer. He would do his best to carry on the duties of Chairman and he was sure that he would have the willing assistance of the delegates who would come to the Meeting next year, the Honorary Secretaries of District Associations and the Vice-Chairmen. Without their help, now that the work of the Association was increasing so rapidly, it would be very difficult to carry on the work. He was glad to see so many new delegates at the Meeting this year, men whom they had not met before, but whom they would be glad to meet again. They were acquaintances now, but he hoped they would become friends in time. He had heard during the Meeting a certain amount of talk about the good the Association was doing. Many men came to the Meeting and found that the Association did do some good. He was not one of the founders of the Association, nor even one of the pioneers in its early work. He only attended the Meeting for the first time six years ago. He took up the work of Honorary Secretary of his Association at a time when that body had a policy to which he was strongly opposed. It was run by members holding most of the offices in this Association. When he first came to Bangalore, the present Chairman (the Hon'ble Mr. J. G. Hamilton) was not then attending the Meeting, so that the only old faces he recognised were, he thought, those of Mr. Danvers and Mr. Martin. Mr. Martin was the only delegate who took the same views as himself, and they were then in a hopeless minority. For the first two or three Meetings which he attended they were in a hopeless position, yet within two years of that time Mr. Martin was elected to the Chair and the following year he (Mr. Abbott) was appointed to the same office. This showed that it was not necessary if they came to Bangalore to fall in with the wishes of the men in power at the time. Men said: "Why should we go to Bangalore to hear that fool talk?" He always replied:—"Come to Bangalore and tell him he is a fool." It could be done in a manner that would ensure his not being chuckered out of the hall. Curiously enough, three-quarters of the men who did this came in course of time to see that they had made a mistake. It was the only way to get work done, to meet together and out of the clash of conflicting opinions to evolve some mutually acceptable scheme.

Mr. E. F. BARBER said that he, too, desired to thank the delegates for the honour that they had done him in electing him Vice-Chairman. He was sure that like Mr. Abbott, he would do his best to help and do all in his power to further the work of the Association. He was afraid that he could not say much about the past, as his memories of the Association did not go as far back as those of Mr. Abbott. He came to this Meeting the first time only two years ago. Consequently, he appreciated the honour which they had now done him all the more. As Mr. Abbott had said, it was a good thing that new men

should come into the Association, but it was also a great pity that they should have lost so many all at once. They regretted, he felt sure, the loss of their advice and guidance, though, perhaps, they did not always agree with them.

Mr. AYLMER MARTIN acknowledged the compliment paid him as one also paid to his Association.

A Vote of Thanks.

Mr. DANDISON moved a vote of thanks to the Chairman in the following speech:—

GENTLEMEN,—It has fallen to my lot to have the honour and pleasure of proposing a very hearty vote of thanks to our Chairman. I may say this is the first time I have attended a U. P. A. S. I. Meeting, and, as this is an honour I did not expect, I hope you will forgive me if I do not do justice to the occasion. I had no idea of the amount of work this Meeting entails, and if so much falls to a delegate's lot, how much more to the Chairman, both before and during the course of this Meeting? I am sure you will all agree with me that the Hon'ble Mr. Hamilton has most ably dealt with all matters, and has helped us in our difficulties. To put it concisely, he has conducted this Meeting in a truly masterly manner. I therefore, have great pleasure in proposing a most hearty vote of thanks to the Chair.

Chairman's Closing Address.

The CHAIRMAN, replying, said that Mr. Dandison, he was afraid, had rather exaggerated anything that he might have been able to do in regard to the work of the Meeting. The proceedings had been long and, perhaps, a little tedious, but the duties had been very light, owing to the care and courtesy of the delegates. There had never been the slightest difficulty at all in conducting the debates. He might have hinted occasionally that the discussions were becoming too discursive, but it had been generally considered that, meeting as they did only once a year, some allowance had to be made. With regard to the work before the Meeting, very little had fallen to his share, much of the work being taken off his hands by Mr. Ormerod and Mr. Anstead. But he was glad indeed to hear a new delegate declare that he had no idea what an amount of work was thrown on the Chairman. Mr. Abbott had no easy task before him, and he was glad when this was recognised. He thanked Mr. Dandison and the delegates very cordially for their vote of thanks.

They had had rather important matters before them at the Meeting. The financial position was not as firm as it should be. As a very large proportion of the general expenditure was directly due to the Scientific Department, it was only right that the increase in the funds of that Department should pay for the increased cost of the general work. Thus the General Fund had been placed on a more sound footing. He expressed the hope that, during the coming year, a little more attention would be paid to financial considerations, and the devising of some means of putting all straight again. They had, as he had said, commenced the organisation of the Scientific Department, and he trusted that he was not going beyond his province as Chairman if he ventured to give them a little advice and expressed his opinion. Mr. Danvers and his colleagues in Mysore had, in a gallant manner, raised the money required for a Scientific Assistant, but, as

far as he knew, they had not secured any surplus. He hoped that a way might yet be found to include Coorg in that scheme. Coorg had officially informed him that if they were admitted to participate in the scheme, they would subscribe to the United Planters' Association on the full acreage basis. It was very much more easy to expand a scheme than to contract it, and, speaking independently of his position as a Mysore man, he would like to see the scheme started with an overflowing cash box. He believed that in a very short time they would decide to separate, and that the Bababudins and North Mysore would raise the money to have a man for themselves, and that South Mysore and Coorg would do the same. They all thought and felt that it would be better to join forces for a year or two and work together. They, in Mysore, had started the whole thing. They knew their man, and he was certain that never a word would be said against him or the work that he had done for them during the past year; but as they had overworked him, they had decided to give him the relief that was so absolutely necessary, and he trusted that the other Districts would, during the year be able to devise schemes on the same lines. He trusted that the delegates would not think that he was dictating to them, but it was a scheme in which he took a very great interest. He had discussed it with men at the Meeting and with others outside, and if he had formed strong opinions on the subject, he felt that he should be allowed to express them.

They had also started an experimental plot, and in regard to this he wished to express his appreciation of the sporting spirit which actuated, Wynaad and South Travancore, though they had no direct interest in the scheme, to subscribe for the help of those who were interested. With regard to the *Planters' Chronicle*, he had very little to say; but it was very satisfactory that their discussion on the subject generally pointed to the fact that it was considered a valuable asset, and not a thing to be lightly thrown about. He had been asked for a ruling as to the duties of Honorary Secretaries of District Associations as regards the Planters' Benevolent Fund. He was not in a position to lay down the law, and he did not wish to do so, but he thought he might say that Honorary Secretaries should do their best for the Fund and for its subscribers. He trusted that Honorary Secretaries, being as they were in charge of the welfare of all planters in their Districts, would add to their duties by endeavouring to collect subscriptions and remind planters that their subscriptions were due.

He had now the pleasant task to express his thanks to the several gentlemen whose work had contributed to the success of the Meeting. Mr. Anstead was one of themselves and did not get public thanks, but he was sure that all would agree that he deserved the best thanks of all for what he had done. He (the Chairman) had a little personal experience of what Mr. Anstead had done. He had been in Bangalore for about ten days, and during all that time he had seen Mr. Anstead hard at work. Mr. Ormerod had made his duties very light by getting everything into order under great pressure, and in spite of the confusion and anxiety consequent on the recent changes, had piloted them through this Meeting to the end. He desired to thank the Press for all that it had done to them and, finally, he desired to thank his old friend, the official reporter (Mr. Bremner) whom he was glad to see at the Meeting again.

He then declared the Meeting closed.

ACCOUNTS,
1910-1911.

Receipts and Disbursements Account
for the year ending

RECEIPTS.

	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
To Balance on June 30th, 1910. ...	...			...			669	1	6
„ <i>Sc. O. Fund</i> —Loan Recovered ...	...			...			409	14	0
„ <i>Subscription</i> —1909-10. Travancore Cardamom Hills ...	63	8	8						
North Mysore ...	26	10	8						
Central Travancore ...	22	7	8						
Mr. H. P. Hodgson ...	15	0	0						
				127	11	0			
„ <i>Subscription</i> —1910-11. Kanan Devan ...	799	13	4						
Nilgiri ...	625	0	0						
North Mysore ...	590	0	0						
South Mysore ...	425	0	0						
South Travancore ...	376	2	0						
Central Travancore ...	375	8	4						
Wynaad ...	362	9	4						
Anamalai ...	310	12	8						
Coorg ...	300	0	0						
Malabar Coast ...	297	1	9						
Shevaroy ...	200	0	0						
Mr. H. P. Hodgson ...	15	0	0						
Mr. Geo. Romilly ...	15	0	0						
				4,691	15	5			
„ <i>Subscription</i> —1911-12. South Travancore ...	...			410	6	0			
„ Books of Proceedings ...	...			184	12	0			
„ Scientific Officer Fund ...	...			1,000	0	0			
„ Government of Madras ...	...			1,000	0	0			
„ Interest on Fixed Deposit ...	...			40	0	0			
„ „ on Current Account ...	...			65	1	8			
„ “Planters’ Chronicle” ...	...			100	0	0			
„ <i>Suspense Account</i> :— Third Dividend from Messrs. Arbuthnot & Co.’s Estate ...	...			454	6	0			
							8,074	4	1
TOTAL RS....	...			...			9,153	3	7

Examined and found correct.

(Signed) W. H. HALDWELL, *Auditor.*

Southern India (incorporated).*30th June, 1911.***PROPERTY AND ASSETS.**

		RS.	A.	P.	RS.	A.	P.
<i>Furniture—</i>							
Value as per last Balance Sheet	...	770	0	0			
Bought during the year	...	126	14	0			
		896	14	0			
Less Depreciation	...	96	14	0			
Subscriptions due	...	...			800	0	0
					543	3	4
<i>Cash and Investments—</i>							
	RS. A. P.						
Advance to Laboratory Equipment Fund	...	680	2	11			
Advance to Laboratory Upkeep Fund	...	495	10	2			
		1,175	13	1			
With Bank of Madras, Bangalore	...	1,102	8	4			
With Bank of Madras, Madras	...	325	8	7			
With Mercantile Bank of India, Ltd.	...	4,727	3	3			
		6,155	4	2			
With Secretary	...	188	7	0			
		7,519	8	3			
		8,862	11	7			
TOTAL RS....		...					
<i>Contingent Asset—</i>							
Claim against the Insolvent Estate of Messrs. Arbuthnot & Co., as per last Balance Sheet	...	15,792	6	7			
Less Third dividend received	...	454	6	0			
		15,338	0	7			

above Balance Sheet is in accordance with the requirements of the

(Signed) W. H. HALDWELL, *Auditor.*

Reserve Fund Account.

	RS. A. P.	RS. A. P.		RS. A. P.	RS. A. P.
To Balance from last year ...	...	2,000 0 0	By Advance to Laboratory Equipment Fund ...	680 2 11	
" Transfer from Suspense Account...	454 6 0		" Advance to Laboratory Upkeep Fund ...	495 10 2	1,175 13 1
" " General Fund.	45 10 0	500 0 0	" Balance in hand ...	...	1,324 2 11
TOTAL Rs....	...	2,500 0 0	TOTAL Rs....	...	2,500 0 0

Scientific Officer Fund Account.

	RS. A. P.	RS. A. P.		RS. A. P.	RS. A. P.
RECEIPTS.			DISBURSEMENTS.		
To Subscriptions, 1909-10—			By Loan refunded to General Fund...	409 14 0	
South Mysore	...	517 8 0	" Payment to Government of Madras ...	3,000 0 0	
" Subscriptions, 1910-11—			" Payment to the U. P. A. S. I.	1,000 0 0	
Nilgris ...	1,250 0 0		" Contingencies ...	199 1 8	
North Mysore	800 0 0		" Balance (Loan to Laboratory Upkeep Fund), ...	...	4,608 15 8
South Mysore...	635 0 0				36 0 4
Wynaad ...	630 0 0				
Coorg ...	287 0 0				
South Travancore	150 0 0				
Central Travancore	150 0 0				
Shevaroy ...	125 0 0				
Mundakayam Rubber	100 0 0				
TOTAL Rs....	...	4,127 8 0	TOTAL Rs....	...	4,645 0 0

S. I. P. B. F. Account.

RECEIPTS.	RS. A. P.	RS. A. P.	DISBURSEMENTS.	RS. A. P.	RS. A. P.
To Balance from last year ...	...	2,247 7 0	By Printing charges (Rules) ...	22 0 0	
" Subscriptions ...	7,637 3 4		" Contingencies ...	5 12 0	
" Interest on Government Securities ...	155 9 10		" Cost of Government Securities, face value Rs. 10,000.	9,686 15 7	
		7,792 13 2	" Balance ...	...	9,714 11 7
					325 8 7
TOTAL Rs....	...	10,040 4 2	TOTAL Rs....	...	10,040 4 2

International Rubber Exhibition Fund Account.

RECEIPTS.	RS. A. P.	RS. A. P.	DISBURSEMENTS.	RS. A. P.	RS. A. P.
To Subscriptions	9,843 12 11	By Remittances to London ...	...	5,225 3 6
			" Photographs ...	...	143 0 0
			" Petties ...	...	4 4 0
			" Balance ...	...	4,471 5 5
TOTAL Rs....	...	9,843 12 11	TOTAL Rs....	...	9,843 12 11

Estimates and Actuals for 1910-11.

RECEIPTS.			DISBURSEMENTS.			ACTUAL.		
			ESTIMATE.			ESTIMATE.		
			RS.	A.	P.	RS.	A.	P.
Balance from 1909-10	...	RS. A. P.	669	1	6	Office Rent, Equipment and Establishment. Stationery. Printing. Postages. Petities. Telegrams. Chairman's Travelling Expenses Planting Member's Travelling Expenses Secretary's Expenses Reporter's Fee Auditor's Fee Subscription to London Chamber of Commerce Secretary's Salary and Allowance Bonus to Editor, "Planters' Chronicle." Periodicals Furniture Labour Maps Enlarged Photograph Book of Proceedings, deficit		
Loan to Sc. O. Fund recovered	...	...	409	14	0			
Subscriptions, 1909-10-11	...	...	...	...	...
Subscriptions, 1909-10—	...	...	...	...	...	2,400	0	0
Kanan Devan	...	800	0	0	0	TOTAL Rs....		
Nilgiris	...	625	0	0	0			
North Mysore	...	526	10	8	...			
South Mysore	...	425	0	0	0	150	0	0
Mundakayam Rubber.	...	387	10	8	...	150	0	0
South Travancore	...	376	2	0	0	15	0	0
Central Travancore	...	375	8	4	...	250	0	0
Wynaad	...	362	9	4	...	75	0	0
Anamalai	...	310	12	8	...	TOTAL Rs....		
Coorg	...	300	0	0	0			
Shevaroy	...	200	0	0	0			
Malabar Coast	...	182	12	8	...	160	0	0
TOTAL Rs....	4,872	2	0	...	...	3,000	0	0
From Ex-Chairmen, &c.	75	0	0	...	...	1,200	0	0
Subscription, 1911-12	...	...	...	...	...	300	0	0
Grant from Government of Madras	...	...	...	...	...	200	0	0
Scientific Officer Fund	...	...	...	...	...	...	...	...
" " Fixed Deposit	...	...	...	...	...	...	...	...
" " Current Account	...	...	...	...	...	...	...	...
The " Planters' Chronicle "	...	...	...	...	...	...	...	...
TOTAL Rs....	8,166	1	10	...	...	7,900	0	0
Third dividend from Insolvent Estate of Messrs. Arbuthnot & Co.	...	...	...	...	...	...	...	...
TOTAL Rs....	8,968	7	7	...	...	...	...	...
Balance	...	...	...	...	...	...	...	...
TOTAL Rs....	8,245	13	4	...	...	...	...	...
Paid to Reserve Fund	...	...	...	...	...	...	...	...
TOTAL Rs....	8,745	13	4	...	...	...	...	...
Balance	...	...	...	...	...	...	...	...
TOTAL Rs....	222	10	3	...	...	...	...	...

CORRESPONDENCE.

CORRESPONDENCE.

Government Purchases of Cinchona.

Letter dated 22nd September, 1910, from the Secretary to the Government of Madras, Revenue Department, to the Secretary, U. P. A. S. I.:—

"I am directed to acknowledge the receipt of your letter dated the 3rd September, 1910, containing a Resolution passed at the Annual Meeting of your Association on the subject of the grant of a fixed minimum price of 1 anna per unit for Cinchona bark purchased from local planters."

"In reply I am directed to refer you to Mr. Wynch's letter No. 1417 B/09-1, dated 27th August, 1909, forwarding a copy of the Order of Government No. 2695, dated 28th September, 1908, on this subject, and to state that the question was recently again considered by Government in July last, and it was decided that the decision arrived at in 1908, could not be modified."

Proposed Bonus on Green Tea.

Letter dated 17th August, 1910, from Mr. George Romilly, to the Secretary, Indian Tea Cess Committee, Calcutta:—

"I am requested by the United Planters' Association of Southern India to approach the Cess Committee, with a request 'that a bonus of 6 pies per lb. on 4 million pounds of Green Tea be allotted from the funds at the disposal of the Committee in order to encourage what may be reasonably hoped will become a self-supporting and expanding industry in the near future.' The sentence in inverted commas is the exact wording of the Resolution passed at the recent Annual Meeting of the Association. I presume, however, that there are no unallotted funds at the disposal of the Committee at the present moment, but I would urge on the Committee the advisability of considering this request before the next Budget allotment."

"I understand that the Green Tea bonus was abandoned because it did not stimulate a continuity of supply and that when 'repeat orders' came in they could not be complied with. In consequence no practical good in the way of establishing a steady industry was achieved. Now, however, if the bonus were to be renewed, the planters of South India are, I am given to believe, prepared to tender for the bonus and to start an industry which will give a continuous supply of Green Tea and which in time will be self-supporting."

"The following are the chief conditions which promise ultimate success. In South India the tea flushes all the year round and there is no cold weather break in tea making. A Ceylon firm is prepared to put up a finishing factory for Green Tea at a port on the coast, if it can be sure of getting at least 2 million pounds of tea in the year. This amount has, I believe, been promised if the bonus is granted."

The firm in question is in a position to find a market for Green Tea and with a continuous supply and uniformity of character in the teas, the market ought rapidly to expand and the industry to become self-supporting. All that is wanted is the stimulus to embark on a new tea-making process which the bonus would supply. Mr. Blechynden has, I think, already reported that he could push the sale of Indian Green Tea if a continuous supply uniform in character was sent to him, but this he has not had hitherto. I would in consequence urge on the Committee that a good opportunity is now available for starting a permanent industry which will help to relieve the pressure on the black tea market if, as is quite possible, over-production of blacks again occurs. Although South Indian planters have received their full share of the benefits conferred on the industry by the able disposal of the Tea Cess funds in the past, they were so situated that they were unable to compete for the Green Tea bonus when it was offered before, and in consequence it is generally felt that it would be fair to give them an opportunity now. However, it is not on behalf of South Indian planters only that I advise the renewal of the bonus, but because I believe that it will be an expenditure of funds advantageous for the whole community."

Letter dated 30th September, 1910, from the Secretary, Indian Tea Cess Committee, to Mr. George Romilly :—

"I am directed to acknowledge the receipt of your letter of 17th August on the above subject, which has now been considered by the Executive Committee of the Cess in meeting. You quote a Resolution passed at the Annual Meeting of the United Planters' Association of Southern India, requesting that a bonus of six pices per lb. on four million lbs. of Green Tea should be allotted from the funds at the disposal of the Committee in order to encourage what may be reasonably hoped will become a self-supporting and expanding industry in the near future. The Executive Committee note from the terms of your letter that a Ceylon firm is prepared to put up a finishing factory for Green Tea at a port on the coast, if it can be sure of getting at least two million lbs. of tea in the year; and you state, that this amount has, you believe, been promised if the bonus is granted.

"2. It is the case, as you mention in the first paragraph of your letter, that there are no unallotted funds at the disposal of the Committee at the present time; and the question of reviving the bonus will have to come before the full Cess Committee at their next Half-yearly Meeting, for discussion. I am also to say that it is not practicable for the Cess Committee to allot any sum for more than one year. With a view to having the question thoroughly considered at the Half-yearly Meeting of the Cess Committee which falls to be held in January next, the Executive Committee are meantime sending copies of your letter to all members of the Cess Committee, and are inviting them to submit their views on the proposal."

Letter dated 24th February, 1911, from Mr. A. D. Jackson to the Secretary, U. P. A. S. I. :—

"I beg to report that I attended the Meeting of the Indian Tea Cess Committee in Calcutta on the 17th instant, and on behalf of the Association supported the proposal to revive the bonus on Green Teas. The matter was discussed at some length, but I regret to say

that when the proposition was submitted to the vote I found myself in a minority of one. The opposition is apparently based on two grounds, firstly, that it is considered that the prospects for a Green Tea Campaign in the United States under the new conditions is sufficiently encouraging in itself, and secondly that there is at present produced in Northern India some 4 million lbs. of Green Tea which command a satisfactory market. The revival of the Green Tea bonus would therefore be immediately payable on these 4 million lbs. at present produced besides what might be produced in Southern India, and the Committee generally are of opinion that such bonus is not justifiable.

"Regretting the non-success of my efforts."

Emigration of Coolies.

Letter dated 1st October, 1910, from the Chief Secretary to the Government of Madras, Public Department, to the Secretary, U. P. A. S. I.:-

"The Government are satisfied with the existing situation, and consider further control over emigration in the interests of coolies uncalled for. Endeavour is always made to rectify any case of abuse which comes to the notice of Government, through the periodical reports they receive as to the condition of oversea emigrants and otherwise, and they have no reason to believe that the general condition of emigrants is such as to call for legislative action. They regret therefore that they are unable to support the proposal of the United Planters' Association of Southern India for fresh legislations in the matter in the directions indicated in the letter read above."

Act I. of 1903.

Letter dated 7th October, 1910, from the Officiating Secretary to the Government of H. H. the Maharaja of Mysore, General and Revenue Departments, to the Secretary, U. P. A. S. I.:-

"With reference to your letter dated 26th August, 1910, forwarding for necessary action certain Resolutions adopted at the recent Annual General Meeting of your Association, I am directed to state with reference to the Resolution relating to the attestation of agreements under Act I of 1903, that the Act referred to therein is operative only in the Presidency of Madras, and that no appointments of attesting Magistrates could therefore be made thereunder in Mysore."

Non-Service of Warrants.

Letter dated 22nd October, 1910, from the Chief Secretary to the Government of Madras, Judicial Department, to the Secretary, U. P. A. S. I.:-

"I am directed to refer to the Resolution adopted by your Association at their last Annual General Meeting, and communicated with your letter dated the 27th August, 1910, regarding the frequent failure in the Coimbatore District and in the Mysore State, to effect service of warrants issued under the Workmen's Breach of Contract Act, 1859, and the Planters' Labour Act, 1903, and requesting that the Police Force in those Districts should be increased."

"In reply I am to inform you that the attention of the Inspector-General of Police and the District Magistrate, Coimbatore, has been drawn to the matter, and that the Police Force in the Coimbatore District, will be largely increased under the general re-organization scheme now in progress, and any remarks the Association have to make in respect of Mysore must be addressed to the Government of that State."

Extradition.

Letter dated 8th March, 1911, from the Chief Secretary to the Government of Madras, Judicial Department, to the Hon'ble Mr. J. G. Hamilton:—

"I am directed to reply to your letter dated the 30th August, 1910, in which was forwarded for the consideration of Government copy of a Resolution passed at the Annual Meeting of the United Planters' Association of Southern India to the following effect:—"

"That the Government of Madras be approached with the view of ascertaining clearly whether extradition will be automatically obtained on the adoption of Act I of 1903 by Planters in Native States, or whether it would be necessary to have special alterations made in existing Treaties with such States."

2. "As regards the first point raised in the above Resolution, I am desired to call your attention to the wording of Section 44 of Act I of 1903, which runs as follows":—

44. 'The Local Government may, by notification, order that processes issued by the Courts, or by any specified courts, in a Native State under any Act for the enforcement of labour contracts in force in such Native State shall subject to such conditions and restrictions as may in such notification be prescribed be executed within the Presidency of Madras as if they were processes issued under this Act.'

"It is clear that this section leaves entire discretion to the Local Government to issue such a notification or not as they may deem expedient, and that therefore it is not the case that extradition would *automatically* follow on the adoption of Act I of 1903 by Native States. Legislation on the lines of that Act is, however, an essential preliminary to the issue of a notification under the above section, and I am to say that if this condition were satisfied, the Government would be prepared to give their careful consideration to any representations made on behalf of the Planting interest with reference to the execution in this Presidency of processes issued by courts in Native States. As regards the further point raised in the Resolution of the United Planters' Association of Southern India, I am to say, that the issue of such a notification would not necessitate any special alterations in existing treaties with Native States.

3. "You enquire, further, whether provision could be made for reciprocity between Native States and for the service of British Courts' warrants in Travancore and Cochin. In reply to the first of these questions, I am to say, that should any two of the Native States subject to the jurisdiction of the Madras Government desire the reciprocal execution of processes arising out of labour contracts, the

Government would be prepared to consider their request provided the States concerned had brought into effect within their respective boundaries legislation similar to Act I of 1903."

4. "As for the service of British warrants in Travancore and Cochin, I am to say that this is not expressly provided for by treaty, but it is not anticipated that any difficulties would arise in arranging for such service if considered advisable."

5. "You desire also to be informed whether the conditions and restrictions referred to in Section 44 of Act I of 1903 can now be explicitly defined. I am to say that, apart from the essential preliminary already referred to, *viz.*, the enactment by Native States of an Act similar to Act I of 1903, the Government are unable at present to say exactly what these conditions and restrictions would be, but apart from other considerations they would certainly deal with the classes of Courts having power to issue such warrants, the offences for which the warrants might be executed in British territory and the procedure by which they might be tried."

6. "I am finally to observe that it would be necessary to lay the whole matter before the Government of India before any orders could be issued."

Prevention of Thefts of Produce.

Letter dated 15th February, 1911, from the Secretary, U. P. A. S. I., to the Chief Secretary to the Government of Madras, Legislative Department:—

I have the honour to state that at the last Annual General Meeting of this Association it was resolved:—

"That in view of the increasing production of Rubber, Tea, Pepper and Cardamoms in Southern India, it is considered advisable to ask the Government to pass some enactment for the protection of these products from theft, both in the plantation and in transit to the Coast, an enactment similar to the Coffee-Stealing Prevention Act being considered suitable."

Considerable time has been required to obtain detailed information concerning the reasons to be advanced for the proposed course with regard to the chief products concerned, and I am only now in a position to bring the subject to your notice.

Rubber.—The main reasons advanced in support of the proposal that Government should legislate to prevent thefts of Rubber are as follows:—

1. The high price of rubber and the ease with which it can be stolen puts great temptation in the way of labourers, cartmen and others to steal it in small quantities.

2. Rubber grown by Indians is now coming into bearing, and a market for it will certainly be started in one of the West Coast towns.

3. Even should dishonest receivers not be able to dispose of stolen crop in India, they will find no difficulty in selling same in Colombo.

4. Rubber can be stolen from the trees either as latex or scrap, neither of which can possibly have any distinguishing marks, while the mark stamped on sheet rubber can easily be cut out.

Legislation has been found very necessary in Ceylon. It is urged moreover that an Act to prevent rubber stealing in India cannot inconvenience the general public, as rubber in its crude state is not an article of daily use like other products grown by planters.

Tea.—What is wanted is protection from thefts of *made tea*. This article is being stolen in small quantities at a time by factory coolies, and in the course of the year a considerable loss is sustained. It is being stolen also on the roads to ports of shipment. Planters represent that the stolen article finds a ready sale. The following remarks are taken from the Annual Report of the Wynaad Planters' Association for the year 1910:—

“ Mr. Nicolls found good orange pekoe and broken pekoe being sold in Nilambur ; the shopkeeper said, ‘ people brought it round for sale.’ Now it is not likely that small hawkers bought these grades at factories. Mr. J. J. Mackenzie complained in March 1909 that a chest of his orange pekoe was found in London to contain nothing but shells, sand, and pieces of burnt wood. Mr. Waddington had a chest of tea accidentally broken while being slung on board in Calicut, when it was found to have been partly emptied of tea, and filled with sand. Mr. Andrews, of Barwood Estate, told me he had been the victim of a more ingenious swindle, for he saw in London a chest of his tea that had been opened, part of the contents stolen and sand put in the middle of the remaining tea so as to escape detection till the chest was turned out. Other instances might be quoted. Messrs. Ferguson & Co. wrote in reply to a suggestion that Agents ought to be very careful in examining all chests sent for shipment, that these frauds are almost impossible to detect because the thieves are provided with solder, tea, lead and other factory requisites, and carefully repair and weigh the chests, filling them with a sufficient quantity of sand to agree with the estate weights. It seems unlikely somehow that the work is done so skilfully as all that, and really careful examination would probably detect most thefts of this kind. At any rate, packing materials cannot be provided at many wayside houses between Wynaad and Calicut ; and if the Police gave their minds to the business it would be scotched if not killed. The trouble ahead is that we do not know how extensive these thefts may be, or what complaints are being made to wholesale dealers in England. If the retailer finds many chests tampered with he may refuse to buy tea that has not been bulked in London. Theft of tea in transit are not confined to Malabar. Complaints have been made from Assam, and no doubt from other parts of India.”

It is well known that the consumption of tea among the natives of India is small. If a minimum quantity could be specified as a “ legal holding ” for any one man—an excess over this quantity found in his possession to render him liable to give a full account as to whence he obtained it—this would probably tend to check dishonest practices.

Pepper.—The reasons why it is considered desirable that an Act similar to that in force for the prevention of stealing Coffee be passed are, briefly, as follows :—

As pepper can at present be moved from place to place without any restriction whatever, it is held to be desirable that any one wishing to move pepper in any quantity larger than is reasonably required for personal use, should be called upon to take out a Pass showing whence the pepper was obtained, and its destination. Such pass to be issued by the vendors or owner of the pepper.

Green pepper gathered and undried, should be especially protected, as there is no reasonable excuse for its transport from the Estate before it has been dried.

Estate coolies are especially open to temptation, as pepper is current coin in the bazaars, it is easily disposed of and is not easily identified, once removed from the Estate.

The chief point it is desired to impress is that a Pass be required for all pepper being moved from place to place except in such quantities (or 1 or 2 seers or so as a maximum) as may be required for personal use.

This limit to be fixed in the Act according to the quantity which may be considered a reasonable one for personal use.

Cardamoms call for no special remark.

I am directed to state that while planters consider that legislation to prevent theft of any and all of the above products is as essential as is the Madras Coffee-Stealing Prevention Act, it is hoped that your Government will consider the claims of each product on their merits and will introduce legislation with respect to one or more of them, even if legislation concerning all is not deemed to be advisable or practicable.

Letter dated 24th May, 1911, from the Chief Secretary to the Government of Madras, Judicial Department, to the Secretary, U. P. A. S. I.:—

“In continuation of letter No. 1228-1, dated 3rd March, 1911, I am directed to state that the Government have given their consideration to the suggestion for the enactment of a special measure for the protection from theft of rubber, tea, pepper and cardamoms, but regret that they do not find that there are sufficient grounds to justify the special legislation desired by the Association.”

Cattle Diseases.

Extract from G. O. “P. No. 889, Revenue, Government of Madras, dated 27th March, 1910 :—

“The Government consider that the carcasses of all animals which die of infectious disease on the road should be buried at the cost of Government in view of the danger of spreading disease by handing them over to persons claiming to be the owners. The amendments to paragraph 5 of Section 42 (Cattle disease) of Chapter

V of the Village Officers' Manual proposed by the Board are accordingly approved subject to the omission of the words 'and the owner of the animal is now known' occurring in the last part of paragraph 5 (11)."

Hybridisation of Coffee.

Proceedings of the Madras Government, No. 1773, Revenue, dated 10th June :—

"Read the following papers :"

"From the Board of Revenue, Land Revenue, Forest Ref. No. 745/11-1, dated 15th March, 1911."

"Letter to the Secretary, United Planters' Association of Southern India, No. 641 E/11-2, dated 27th April, 1911."

"Letter from the Secretary, United Planters' Association of Southern India, dated 3rd May, 1911."

"Order."

In the above correspondence proposals are submitted for the opening of an experimental plantation on the Nilgiris for the hybridisation of coffee. It is reported that the Green bug (*Lecanium viride*) is causing extensive damage to coffee on the Nilgiris and it is desired to produce a hybrid capable of resisting the attacks of the bug. It is proposed to open the plantation on about five acres of land in the Tiger Hill reserved forest about two miles above Benhope and lying between the Ootacamund Ghat Road and the Coonoor River. It is suggested that the plantation should be in charge of Mr. F. H. Butcher, Curator, Government Botanical Gardens, Ootacamund, and should be under the direction of Mr. R. D. Anstead, the Scientific Expert appointed to assist the Planting Industry in Southern India.

2. "On the understanding that the United Planters' Association of Southern India is prepared to bear the entire cost of the scheme, if Government provide the land and supervision, the Government approve of these proposals and sanction the creation of the experimental plantation in five acres of the Tiger Hill Reserve under the general charge of Mr. Butcher; no extra remuneration will be granted to him on this account. The Board of Revenue is requested to ascertain and report, before any steps to start the plantation are taken, whether the United Planters' Association of Southern India accepts the proposed arrangement."

International Rubber Exhibition.

Extracts from Report, dated 20th July, 1911, of Mr. J. A.

Richardson :—

"The International Rubber Exhibition was opened officially by Sir Henry Blake on the 26th June, and proved a great success and was a revelation to all connected with the Rubber Industry.

"There was a good representative gathering at the opening and I saw several South Indian men, amongst others our late Planting Member Mr. H. P. Hodgson, who was on the Exhibition Committee."

"The whole space of the Agricultural Hall was fully taken up and it would take too long to describe each and all of the various Exhibits, but I think every country which could claim to grow rubber was represented as well as many of the chief Rubber Companies.

"Brazil, the Belgian Congo and the Netherlands (including Java and Sumatra) had very fine courts, but naturally our nearer neighbours, Ceylon and the Straits, were of special interest to me.

"Ceylon as usual put a very fine show as also did the Straits. They both had some very fine samples of Rubber in bulk which was where we failed as our samples were much too small, in some cases consisting of 4 or 5 sheets or biscuits which considering the quality there was, was rather a pity.

"Mysore sent in a sample of Ceara, but it showed signs of having been packed before it was dry and the biscuits had stuck together.

"Coorg made a good show with Ceara, but like other friends on the Shevaroy's made their sheets and biscuits much too thin. They looked very nice, but commercially were not of much value, though the rubber was excellent."

"Without doubt the finest sample of Rubber in our court and perhaps one of the best in the Exhibition was from the Mooply Valley Rubber Company, and there was little doubt according to brokers and experts that had there been sufficient quantity to enter it for the competitions it would certainly have won a prize.

"Next in favour was Kuttikal, which had a reasonably sized sample followed closely by the Travancore, Stagbrook, and Orkaden Companies, and Mr. Murphy's Yendayar Estate, which had good even samples, but much too small and most of them showing signs of not being sufficiently dry. The Rani Company, had a good though most minute sample, which was the only machine-made rubber from South India. A good deal of surprise was expressed that our premier Rubber Company, in Travancore, the Periyar, did not exhibit, and I think there were several others who might have sent in samples. We made the most of what we had however and with the help of photographs, mostly supplied by the Mooply Valley Rubber Company, and one large frame of photos. from the Periyar Company, made the courts as attractive as possible.

"There were also samples of Coffees from Mysore and Coorg and Tea from Glenmary Estate, Peermade and Poonmudi, in South Travancore."

"Specimens of South Indian timbers kindly supplied by Messrs. Aspinwall & Co., Ltd., Cochin, for the previous Exhibition and other products all showing the fertility of South India added interest to our court."

"I was disappointed in not getting some sporting trophies which I understand were coming, otherwise I would have arranged for them on this side, and the only relics of the chase consisted of two

stuffed crocodiles from Travancore which were much admired and on more than one occasion I heard several visitors ask from what part of them rubber was extracted.

"On Monday, the 3rd July, we held a meeting of the South Indian Committee and others interested, and I arranged the following programme of practical demonstrations which were of great interest to some of our Directors who had no practical knowledge of plantation work :—

2-45 p.m. Tapping live trees at the Mexican Court.

3-0 p.m. Demonstration on Chemical coagulation.

3-20 p.m. Demonstration of washing and creeping by Messrs. David Bridge and Co.

3-40 p.m. Motive Power, Hornsby Oil and Suction Gas Engines.

4-0 p.m. Meeting. Tea, &c.

4-45 p.m. Visit to South India Court.

5-15 p.m. Washing demonstrations by Messrs. Francis Shaw and Company.

5-35 p.m. Motive Power, Crossley's Oil and Gas Engines.

"It was quite a representative gathering of South Indian men and others interested and the following were present: Messrs. Acworth, Knight, Valentine, Russell, Sanderson, Harris, Clark, Nicholson, Grey, Gudgeon, Graham, Laurie, Errol-Sinclair, Arbuthnot, Proudlock, Lindsay, and self. Our photograph was taken at the time, of which a few copies have been sent out to our Secretary and copies can be had at 3/- each. A separate photo. of the South Indian Court alone was also taken and copies of this can be had at the same price.

"We were again fortunate in securing the services of Mr. J. A. R. Clark, an old Travancore planter, who looked after our interests at the last Exhibition, to do the same for us this time. Knowing South India well he was able to give visitors information regarding our different exhibits and climatic conditions of the country.

"The pamphlet, of which 500 are being sent out to India, was distributed freely during the Exhibition and was much sought after by those interested in South India. I would recommend getting a dozen or so specially bound and presented to different officials both in Madras and Native States."

"For the benefit of one or two who were sceptical as to the use or advantage to be gained by such an exhibition I should just like to say a word or two.

"To begin with I may say the magnitude of the Exhibition was beyond all expectations and for planters who happen to be home there was a fund of information at hand which might never be gained again in a lifetime as regards machinery and manufacture.

"There were practical demonstrations of coagulation with different forms of chemicals, smoking and by Gordon's Centrifugal coagulators with latex shipped home for the purpose. Then again there were various kinds of washers all working on rubber coagulated on the spot. Different methods of drying and down to patent chests for packing. There were quantities of tapping knives and collecting cups of all shapes and forms so that the whole process from beginning to end could be demonstrated on the spot.

"I can still hear a particular friend of mine who attended our last Meeting grumble and say he was not there to see it for himself and my reply to him is to order at once a copy of the book to be published as a result of the various Conferences and Lectures which took place, during the Exhibition.

"So much from a planter's point of view, and we will now look at it from the manufacturer's side of the question. Most of the largest firms were represented and they could see for themselves by practical demonstration how our rubber is treated from start to finish.

"Then put the planters and the manufacturers together in conference as we had on several occasions and I think even the most sceptical will admit that there was some good in the Exhibition.

"Besides this several inquiries were made by French and German firms as to whether any of our rubber crops could be sold direct and for one or two marks they were prepared to buy forward at a very substantial rise on present prices. These gentlemen were of course referred to the London agents of the Estate, or Company, concerned.

"The actual cost of our exhibits I cannot yet give you, but I expect it will be about £420. ...

"I am greatly indebted to Mr. Gudgeon, of Cochin, and Mr. Weymouth, of Coorg, who spent a great deal of time with me inspecting different types of machinery.

"I attended the Exhibition daily from the 24th June up to the 13th July, and consider my time well spent.

"The Association's thanks are due to Messrs. Rowe, White & Co., and more especially to Mr. Errol-Sinclair of that firm, for the excellent way all the arrangements for our exhibit were carried through.

APPENDIX.

APPENDIX.

RULES OF THE U. P. A. S. I. (Incorporated).

(As revised at the Annual General Meeting, 1911).

I. (a) That voting be by the elected delegates of each District Association.

(b) That every District Association be assessed at the rate of 8 pies per acre on the area under cultivation represented by Members of the Association. That a vote shall be given for every Rs.10 subscribed.

(c) That each District Association declare at the Annual Meeting of this Association the area on which the assessment is to be calculated for the ensuing year.

II. That the Annual General Meeting shall be held at Bangalore during the months of July or August in each year.

(1) That at least three subsidiary Sectional Meetings at convenient centres be held in addition each year to deal mainly with coffee, tea, and rubber, respectively.

(2) That these Sectional Meetings devote special attention to the purely agricultural aspect of the planting industries by means of lectures, exhibitions, and discussions.

(3) That all Resolutions passed at these Sectional Meetings shall be forwarded to the U. P. A. S. I., to be reconsidered at the next Annual Meeting of that body, and that such Resolutions shall not become in any way binding upon the U. P. A. S. I., unless re-affirmed at an Annual Meeting.

(4) That the Secretary of the U. P. A. S. I. be hereby empowered and instructed to approach the Honorary Secretaries of the District Planters' Associations with a view to making the necessary arrangements for holding such Sectional Meetings during the ensuing year, and in future years; that he shall attend all such Meetings, if possible; and that a travelling allowance shall be granted to him for this purpose, of a double first-class railway fare and Rs.5 halting allowance."

III. That a quorum of four members shall suffice for the transaction of business by the Council.

IV. That the expenses of the delegates to any Meeting of the Council convened under Article 24 be defrayed by the Association.

V. That in all Meetings and in the conduct of business by the Council, the system of voting be on the subscription basis of one vote for every Rs.10 subscribed, and that the Chairman, Vice-Chairmen, Planting Member and the ex-Chairman of the previous year shall each have one vote.

That the Scientific Officer shall be permitted to move Resolutions at Meetings, but shall have no vote.

VI. That the Council shall have power to appoint the Chairman, two Vice-Chairmen, and Secretary, should any of the offices become vacant during their term of office.

That should a vacancy occur in either of the appointments of Vice-Chairman during any financial year at any time greater than one month from the expiry thereof, the Council shall elect one of their number to fill such vacancy.

VII. That ex-Chairmen, ex-Vice-Chairmen and ex-Planting Members of Council may be allowed to attend Meetings, to propose Resolutions or Amendments, and to vote, having one vote each; and do in that case pay an annual subscription of Rs.15: and that while in India they be entitled also to receive the circulars of the Association upon intimating their wish to the Secretary.

That delegates of the previous year be admitted in like manner or one year only.

VIII. All questions in which the Association is interested shall be determined at the Annual Meeting, and after such Meeting the general business of the Association shall be conducted, *ad interim*, by the Chairman, Council and Secretary and their action shall be submitted for confirmation at the next Annual Meeting.

IX. Proxies sent to the Secretary one fortnight before an Ordinary General Meeting shall be accepted, and proxies sent to the Secretary one week before an Extraordinary General Meeting shall be accepted. In both cases they shall be properly stamped and shall state clearly the purpose for which they are given. (*Vide* Form of Proxy given below).

X. Any member having an original proposition to propose shall give notice to the Secretary in time to allow him to give 30 days' notice before the assembling of any Meeting, and no subject shall be discussed without such notice except with the unanimous consent of the Meeting.

FORM OF PROXY.

The Proxy authorises.....to vote for me at the Meeting of the U. P. A. S. I. to be held on.....and any adjournment thereof on the Resolution relating to.....and on any amendment that may arise therefrom,

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